BUILDING M7-505 TREATMENT TANK
(SWMU 039)

ANNUAL PERFORMANCE MONITORING REPORT

KENNEDY SPACE CENTER, FLORIDA

Prepared for:



National Aeronautics and Space Administration
Kennedy Space Center, Florida

December 2015
Revision 0

Prepared by:
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Prepared for:
Environmental Assurance Branch
National Aeronautics and Space Administration
John F. Kennedy Space Center
Kennedy Space Center, Florida 32899

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December 2015

I hereby certify that this Annual Performance Monitoring Report for the Building M7-505 Treatment Tank area located at the John F. Kennedy Space Center, Florida, was prepared using appropriate geologic, hydrogeologic, and engineering standards of practice.

_____
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ABBREVIATIONS AND ACRONYMS

AOI	area of influence
APMR	Annual Performance Monitoring Report
Arcadis	Arcadis U.S., Inc.
bls	below land surface
cDCE	cis-1,2-dichloroethene
CMS	Corrective Measures Study
COC	chemical of concern
DO	dissolved oxygen
EDE	Electronic Data Exchange
FDEP	Florida Department of Environmental Protection
ft^2	square foot/feet
ft/ft	feet/foot per foot
GCTL	Groundwater Cleanup Target Level
hp	horsepower
IAS	in situ air sparge
IM	Interim Measure
KEDD	KSC Electronic Data Deliverable
KSC	Kennedy Space Center
KSCRT	Kennedy Space Center Remediation Team
LTM	Long-Term Monitoring
µg/L	micrograms per liter
mg/L	milligram per liter
NADC	Natural Attenuation Default Concentration
NASA	National Aeronautics and Space Administration
M505	Building M7-505
OM&M	operation, maintenance, and monitoring
RCRA	Resource Conservation and Recovery Act
RFI	RCRA Facility Investigation
ROI	radius of influence
RIS	Remediation Information System
scfm	standard cubic feet per minute
SOP	standard operating procedures
SWMU	Solid Waste Management Unit
TCE	trichloroethene
USEPA	U.S. Environmental Protection Agency
VE	vapor extraction
VC	vinyl chloride
VOC	volatile organic compound

EXECUTIVE SUMMARY

This Annual Performance Monitoring Report presents a summary of Interim Measure (IM) activities and an evaluation of data collected during the third year (June 2014 to September 2015) of operation, maintenance, and monitoring (OM&M) conducted at the Building M7-505 (M505) Treatment Tank area, Kennedy Space Center (KSC), Florida ("the Site"). Under KSC's Resource Conservation and Recovery Act Corrective Action Program, the M505 Treatment Tank area was designated Solid Waste Management Unit 039.

Arcadis U.S., Inc. (Arcadis) began IM activities on January 10, 2012, after completion of construction of an in situ air sparge (IAS) system to remediate volatile organic compounds (VOCs) in groundwater at concentrations exceeding applicable Florida Department of Environmental Protection (FDEP) Chapter 62-777, Florida Administrative Code, Natural Attenuation Default Concentrations (NADCs). This report presents a summary of the third year of OM&M activities conducted between June 2014 and September 2015.

In Situ Air-Sparging System Description

On January 10, 2012, an IAS system consisting of 21 IAS wells and remediation equipment was started at the Site and operated until June 5, 2013, when the system automatically shut down due to power interruption. The system was not restarted based on a KSC Remediation Team (KSCRT) decision in May 2013 to discontinue system operation until the IAS system was expanded to include seven additional IAS wells to remediate trichloroethene (TCE) in groundwater at concentrations exceeding the FDEP Groundwater Cleanup Target Level (GCTL). The additional IAS wells and associated piping and appurtenances were constructed between September and December 2013, and the expanded system (including 28 IAS wells) was restarted on December 11, 2013.

The IAS equipment consists of a 20-horsepower (hp) Rietschle Model DLR250 rotary-claw air compressor, 1-hp American Industrial Heat Transfer heat exchanger, distribution manifold, and associated appurtenances. The IAS system is controlled by various sensors and motor-actuated valves connected to a programmable logic controller, which allows cyclical operation of the remediation system in four individual IAS zones. The control panel includes a wireless, internet-type telemetry system that can be remotely assessed to periodically monitor system conditions or, should failure/alarm condition occur, send email notifications. The IAS equipment is housed inside a mobile, enclosed trailer to suppress sound and protect mechanical equipment from the elements.

System Operation, Maintenance, and Monitoring

During the third year of system operation, monthly OM&M events were conducted and included equipment inspection, routine preventive maintenance, and system operation monitoring data collection. From the initial IAS system startup on January 2012 through September 25, 2015, the IAS system operated more than 25,000 hours, or approximately 95 percent of the time during this period (adjusted for scheduled shutdowns during groundwater-sampling events). The 28 IAS wells operated at an average approximate flow rate of 2.0 to 3.0 standard cubic feet per minute (scfm) in IAS wells. The pressures at IAS wells generally ranged from 10 to 26 pounds per square inch.

Dissolved-Oxygen Concentrations

Arcadis compared the monthly monitoring well operational data to baseline data to evaluate maximum changes in the dissolved-oxygen (DO) concentrations in monitoring wells and influence in the DO concentration from the IAS system. Arcadis elected to evaluate the maximum changes because the observed DO measurements are highly dependent upon how long a zone was operational when measurements were collected. Generally, Arcadis collected measurements from the zone in operation upon arrival at the Site. Then, Arcadis would cycle the system for approximately one hour prior to collecting measurements in subsequent zones. Therefore, the DO measured in the monitoring wells from these subsequent zones may not accurately represent full influence of the system during cyclical operation.

The data indicated maximum DO concentrations increased in 22 of the 25 monitoring wells measured at M505. The maximum observed DO concentrations increased to greater than 5 milligrams per liter (mg/L) in 14 of the performance monitoring wells at M505. Five of the monitoring wells indicated maximum observed DO concentrations between 2 and 5 mg/L. The remaining three monitoring wells indicated maximum observed DO concentrations between 1 and 2 mg/L.

Pressure Readings

Pressure readings were measured at select monitoring wells during the reporting period when the IAS system was operational. The data indicated that maximum positive pressure increases greater than 1 inch water column and/or artesian/bubbling conditions were observed in 16 of the 25 monitoring wells at M505.

Monitoring wells MW0024-035.0, MW0032-035.0, MW0033-025.0, MW0035-025.0, MW0036-035.0, MW0044-027.5.0, MW0042-035.0, MW0050-010.0, and MW0054-010.0 commonly demonstrated strong positive air pressure (greater than 9 inches of water column), with MW0050 up to 40 feet from IAS wells.

Area of Influence

The estimated IAS area of influence (AOI) was estimated based on pressure gauge readings and DO concentrations at performance-monitoring wells and their distance to nearest IAS wells. The radius of influence (ROI) in the subsurface zones was estimated as follows:

- Shallow zone (5 to 20 feet below land surface [bls]): 20 to 40 feet
- Intermediate-shallow zone (20 to 30 feet bls): 15 to 30 feet
- Intermediate zone (30 to 40 feet bls): 15 to 30 feet

Groundwater Monitoring

Groundwater sampling of select performance-monitoring wells was conducted quarterly during August 2014, November 2014, February 2015, and September 2015 (between 18 and 26 each event) to assess IAS system effectiveness in remediating the chemicals of concern (COCs) in groundwater. Annual groundwater performance monitoring was conducted in May 2015 and included sampling of 36 monitoring wells. At the M505 facility, the COCs were identified as TCE, cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC).

Of the 49 wells historically sampled during operation of the IAS system, 39 performance monitoring wells are located within the AOI of the IAS system. Twenty-eight monitoring wells within the AOI of the IAS system (72 percent) exhibited COC concentrations less than applicable FDEP GCTLs. Eleven monitoring wells within the AOI of the IAS system exhibited COC concentrations exceeding applicable GCTLs (but less than the NADCs) for TCE, cDCE, and VC during the September 2015 monitoring event. Three monitoring wells beyond the AOI of the IAS system exhibited VC concentrations greater than the GCTL.

A comparison of the baseline (pre-IAS system startup) and annual groundwater-sampling events for TCE, cDCE, and VC concentrations within the AOI of the IAS was conducted to evaluate system effectiveness in reducing COC concentrations. The data indicate that the COC concentrations in samples collected from monitoring wells within the AOI at M505 remain below the NADCs and continue to trend downward toward the GCTLs. Reductions in average TCE, cDCE, and VC concentrations within the AOI at M505 after three years of system operation were 92, 89, and 85 percent, respectively.

Based on the September 2015 sampling data, the area of affected groundwater exceeding the GCTLs has been reduced from approximately 140,885 to 32,000 square feet (ft^2); this corresponds to a reduction in affected groundwater of approximately 77 percent. Within the 32,000-ft^2 of affected groundwater with COC concentrations exceeding the GCTLs is an approximately 18,425-ft^2 area of VC-affected groundwater beyond the AOI of the IAS system.

Conclusions/Recommendations

The IAS system operated effectively and the AOI exceeded the 15-foot ROI design criteria, extending to 40 feet in some areas. As a result, the first milestone of the corrective action objective to reduce COC concentrations to below the NADCs has been achieved and maintained at M505. Concentrations of TCE, cDCE, and VC at M505 within the AOI have been reduced 92, 89, and 85 percent, respectively. In addition, the area of affected groundwater with COC concentrations exceeding the GCTLs has been reduced approximately 77 percent.

Based on data analyses, the trends in COC concentrations at the Site generally decreased within the AOI during Year 3 of operation. However, rebounds in COC concentrations back above the GCTLs were observed in MW0013IS-025.0, MW0020-036.0, and MW0022-025.0 during the performance monitoring period. The rebound in MW0020-036.0 and MW0022-025.0 occurred during shutdown of this remediation zone after achieving GCTLs in this area in Year 2. The rebound in MW0013IS-025.0 is suspected due to change in groundwater flow direction in this area to the northeast. The rebound may also be attributed to increased rainfall during the summer of 2015.

The IAS system was shut down on September 25, 2015, and remains off per NASA's direction. As concentrations of COCs are below the NADCs and only remain above the GCTLs in 11 monitoring wells within the AOI of the IAS and three monitoring wells beyond the AOI, it is recommended that post-remediation monitoring of these 14 monitoring wells be conducted semiannually for one year. After one year of post-remediation monitoring, the Site should be placed into the Industrial Area Long-Term Monitoring (LTM) Program. In conjunction with transition to the LTM Program, the monitoring plan should be re-evaluated to identify select monitoring wells and sampling frequency to evaluate natural attenuation progression. In addition, the Statement of Basis and Land Use Control Implementation Plan should be revised to reflect transition from active remediation to LTM.

During the December 2015 KSCRT meeting, the team concurred that the IAS should remain off and the Site transitioned to LTM following completion of semiannual post-remediation monitoring for one year. In addition, the KSCRT concurred with the proposed 14 monitoring wells for inclusion in the semiannual post-remediation monitoring.

1.0 INTRODUCTION

Arcadis U.S., Inc. (Arcadis) has prepared this Annual Performance Monitoring Report (APMR; Year 3) to summarize the operation, maintenance, and monitoring (OM&M) of an in situ air-sparging (IAS) system installed to remediate groundwater at the Building M7-505 (M505) Treatment Tank area at Kennedy Space Center (KSC), Florida (Figure 1-1; "the Site"). This APMR presents a summary of Interim Measure (IM) activities and an evaluation of data collected during the third year of OM&M monitoring (from June 2014 to September 2015). Under KSC's Resource Conservation and Recovery Act (RCRA) Corrective Action Program, the M505 Treatment Tank area was designated Solid Waste Management Unit (SWMU) 039. A site plan is included as Figure 1-2.

The IAS system was initially constructed by Arcadis for the National Aeronautics and Space Administration (NASA) under Basic Ordering Agreement NNK09CA03B, Contract NNK011CA42T, Delivery Order 20, and started on January 10, 2012. Subsequently, the system was expanded and restarted under a modification to Delivery Order 20 on December 11, 2013. System expansion and re-startup were conducted in general accordance with the Florida Department of Environmental Protection (FDEP)-approved IM Work Plan Addendum dated September 2013 (Arcadis 2013a). System-expansion activities were presented in the Construction Completion Report Addendum dated February 2014 (Arcadis 2014a).

The overall objective for the Site is to ultimately reach the FDEP Chapter 62-777, Florida Administrative Code, Groundwater Cleanup Target Levels (GCTLs). The first milestone in achieving the overall objective was implementation of the IM to remediate the area of affected groundwater at the Site with concentrations exceeding the Natural Attenuation Default Concentrations (NADCs) to facilitate transitioning the Site into a monitored natural attenuation program. The first milestone was achieved in January 2013, and the KSC Remediation Team (KSCRT) subsequently recommended in May 2013 to expand the IM to remediate trichloroethene (TCE)-affected groundwater exceeding the GCTL prior to transition into a monitored natural attenuation program.

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2.0 SITE BACKGROUND

2.1 Site Location

KSC is located on the northern portion of Merritt Island, between the Indian and Banana Rivers, in Brevard County, Florida. M505 is located in the KSC Industrial Area, northeast of the intersection of Third Street S.E. and "D" Avenue, and south of the NASA Parkway East. The Site is located in Section 8, Township 22S, and Range 37E, Orsino Topographic Quadrangle. A site location map is provided as Figure 1-1.

2.2 Historical Site Use

The Supply, Shipping, and Receiving Warehouse (M7-504) was the first building constructed in this area between 1963 and 1964. In 1966, this building was incorporated into the Payload Support Building (M7-505). Past and current operations at the Payload Support Building include warehouse storage, materials testing, metal treatment, and machine shop activities. The western side of the building contains a corrosion shop, electronics shop, maintenance shop, pneumatic shop, cable-fabrication shop, a laboratory that makes molds for cables, instrumentation laboratory, a cooler, storage area, and a paint booth. The eastern side of the facility is primarily used for office space. A loading/receiving dock is located on the northern portion of the Payload Support Building. A separate metal shed used for shipping and receiving activities, as well as material storage, is located between the east and west wings at the southern portion of the Payload Support Building.

Material fabrication, testing, and metal corrosion-prevention treatment activities have been performed at M505 since construction in 1964. A waste-treatment tank was operated beneath the parking lot until removal in September 1991, along with a grease interceptor tank. The waste-treatment tank was of concrete construction and was used for pH neutralization of waste solutions generated in the metal treatment laboratory. Effluent from the waste-treatment tank discharged through underground metal piping to a north-south trending ditch west of M505. These activities occurred until 1986, when the metal treatment laboratory floor drain and the drainage ditch effluent pipe were plugged. The grease interceptor tank was located immediately west of the waste-treatment tank and received wastewater generated at a paint shop located inside M505. The grease interceptor tank drain with waste-treatment tank effluent was connected to effluent piping coming from the waste-treatment tank. Wastewater discharged from the paint shop ultimately drained to a north-south drainage ditch located west of the facility. The treatment tank area, grease interceptor tank area, effluent drain lines, and the north-south trending ditch comprise the M505 treatment tank area (SWMU 039).

2.3 Summary of Historical Assessment and Remediation

In May 1995, NASA completed a RCRA Facility Investigation (RFI) Work Plan, which was approved by the U.S. Environmental Protection Agency (USEPA) in September 1995. The RFI Report for the M505 facility was submitted by NASA in September 1999 and was approved by the USEPA in October 1999. A Corrective Measures Study (CMS) was approved by FDEP in February 2001. In accordance with the CMS, NASA completed the installation of a pilot-scale IAS and vapor-extraction (VE) system at M505 in May 2002 and started the system in June 2002 to remediate volatile organic compounds (VOCs) in groundwater to less than 50 percent of the FDEP NADCs. The Construction Report and Preliminary Pilot Study Results of the IAS/VE system were submitted to NASA in February 2003.

In August 2008, the KSCRT agreed to continue OM&M of the pilot-scale IAS system to treat and prevent downgradient migration of affected groundwater and discontinue operation of the VE system. The VE system was shut down on September 30, 2008.

Following additional characterization of affected groundwater, the KSCRT concluded in October 2010 that the chlorinated hydrocarbons TCE, cis-1,2-dichloroethene (cDCE), and vinyl chloride (VC) were horizontally and vertically delineated in accordance with the requirements of the KSC Step 1 Engineering Evaluation. Furthermore, based on assessment and performance-monitoring data, the KSCRT recommended that the pilot-scale IAS remediation system be shut down. The KSCRT concluded that the pilot-scale IAS system had limited effectiveness in addressing the entire area of affected groundwater, which extended beyond the IAS area of influence (AOI) and continued operation would provide minimal reduction in VOC mass. The system was subsequently shut down on November 29, 2010.

Although not defined as chemicals of concern (COCs), dissolved aromatic hydrocarbon compounds—including total xylenes, ethylbenzene, isopropylbenzene, naphthalene, and 1,2,4-trimethylbenzene—were detected at concentrations that exceeded applicable GCTLs in a localized area at the Site. The petroleum hydrocarbon-affected groundwater is located within the chlorinated VOC-affected groundwater as described in the Step 1 Engineering Evaluation (Arcadis 2010).

In March 2011, a KSC Step 2 Engineering Evaluation was presented to the KSCRT to review and evaluate alternatives that would remediate the Site's affected groundwater. The KSCRT concluded the data presented fulfilled the requirements of the Step 2 Engineering Evaluation and requested that a Step 3 Engineering Evaluation be performed to develop the groundwater-remediation IM. The Step 3 Engineering Evaluation for implementation of an IAS system was presented and approved at the May 2011 KSCRT meeting.

Between November 7, 2011, and January 10, 2012, an IAS system consisting of 21 IAS wells and remediation equipment was constructed at the Site as shown on Figure 2-1.

Groundwater samples were collected from 24 groundwater performance-monitoring wells and analyzed for VOCs using USEPA Method 8260B to establish baseline conditions prior to system startup, which occurred between January 9 through 11, 2012. Quarterly and annual groundwater-sampling events were conducted at specified performance-monitoring wells to provide sufficient data to evaluate whether remedial operations were reducing the concentrations of constituents detected in groundwater at the Site.

The results of the first year of operation (January 2012 to January 2013) of the IAS system were provided in the Corrective Measure Implementation / Interim Measure Annual Report (Arcadis 2013b). The data indicated that the IAS system was operating effectively and the AOI generally exceeded the 15-foot radius of influence (ROI) design criteria, extending to 40 feet in some areas. As a result, the first milestone of the corrective action objective to reduce COC concentrations to below the NADCs was achieved at M505. Concentrations of cDCE and VC at M505 within the AOI were reduced 81 and 67 percent, respectively. Based on data analyses, the trends in COC concentrations at the Site were continuing to decrease within the AOI.

The first-year data were presented at the May 2013 KSCRT meeting, and the team concluded that system operation should be suspended at the Site until expansion of the system to add IAS wells in the north-south drainage swale and along the western edge of the affected groundwater at M505 beyond the AOI where TCE was present at concentrations greater than the GCTL of 3 micrograms per liter (µg/L). The IAS system operated until June 5, 2013, when the system automatically shut down due to power interruption.

Seven additional IAS wells and associated piping and appurtenances were constructed as shown on Figure 2-1 between September and December 2013, and the expanded system (including 28 total IAS wells) was restarted on December 11, 2013 (Arcadis 2014a). The second-year data (February 2013 to May 2014) were presented at the August 2014 KSCRT meeting, and the team concluded that system operation should continue in an attempt to decrease the TCE concentrations below the GCTL of 3 µg/L. The results of the second year of operation of the IAS system were provided in Annual Performance Monitoring Report (Arcadis 2014b). The data indicated that the IAS system was operating effectively and the AOI generally exceeded the 15-foot ROI design criteria, extending to 40 feet in some areas. As a result, the concentrations of TCE, cDCE, and VC at M505 within the AOI were reduced 85, 86, and 88 percent, respectively.

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3.0 SCOPE OF WORK

This section summarizes the activities associated with the OM&M of the IAS system between June 2014 and September 2015. OM&M activities include, but are not limited to, measuring system operating parameters, making system repairs and adjustments, evaluating groundwater influence, and assessing remedial progress.

3.1 System Operation and Monitoring Activities

For the third year of IM, OM&M events were conducted monthly. During each OM&M event, the equipment was inspected, routine preventive maintenance conducted, and monitoring data collected. Adjustments were made to the system as needed. The following activities were performed during the monthly OM&M events:

- The pressures and flow rates of the IAS wells were measured and recorded.
- The depths to groundwater, dissolved-oxygen (DO) concentrations, and pressure readings were measured in monitoring wells specified in Table 3-1.

During the IM, fine-tuning and adjustments (e.g., airflow rates, well pressures, operating time cycles) were made to the system as needed, based on the data collected. These fine-tuning adjustments were intended to maximize the performance of the remediation system. The operation and maintenance field logs are included as Appendix A.

3.2 Groundwater Sampling

During the reporting period, quarterly groundwater sampling of 18 to 26 performance-monitoring wells was conducted in August 2014, November 2014, February 2015, and September 2015, and annual sampling was conducted at 36 performance-monitoring wells in May 2015 to provide sufficient data to evaluate whether remedial operations are reducing the concentrations of constituents detected in groundwater at the Site. Field activities included shutting the IAS system down at least two days prior to sampling. At the initiation of sampling, the monitoring wells were unlocked, opened, allowed to stabilize to atmospheric pressure, and depth-to-water measurements were collected from the tops of casing to the nearest 0.01 foot. The sampling schedule is specified in Table 3-1.

Groundwater samples were collected in accordance with the FDEP's Standard Operating Procedures for Field Activities (SOPs; FDEP 2014) and the Sampling and Analysis Plan for the RCRA Correction Action Program at the KSC (NASA 2011). Groundwater samples were collected using a peristaltic pump set at a low flow rate to minimize water drawdown and turbidity in the well. Sampling depth was set at the midpoint of the screened interval, and groundwater-sampling parameters were monitored for stabilization in accordance with FDEP SOPs. Stabilization parameters were recorded on groundwater sampling forms, and the purge water was containerized in 55-gallon drums staged on a

spill pallet at the Site. Groundwater samples were transported to ALS Environmental (formerly known as Columbia Analytical Services, Inc.) in Jacksonville, Florida, under standard chain-of-custody protocol for chemical analysis. Groundwater samples were analyzed for VOCs using USEPA Method 8260B. Groundwater sampling logs are included as Appendix B.

The KSCRT has implemented a KSC Remediation Information System (RIS). Part of the RIS includes an Electronic Data Exchange (EDE) that is designed to assist contractors tasked with the electronic submittal of environmental data. The EDE module contains seven KSC Electronic Data Deliverables (KEDDs), and location and sample identification nomenclature was established. The monitoring samples that are discussed in this report use the nomenclature that was established for the KEDDs. The KEDDs for this reporting period were uploaded to the KSC RIS database, and the upload completion tickets are provided in Appendix C.

4.0 OPERATION, MAINTENANCE, AND MONITORING DATA EVALUATION

This section details the OM&M of the M505 remediation system for the period from June 2014 through September 2015. OM&M activities included conducting monthly site visits, collecting quarterly and annual groundwater samples, performing preventive maintenance, and repairing or adjusting the remediation system when necessary.

4.1 System Operation

The IAS system was continuously energized and failsafe monitored, except during scheduled shutdowns prior to groundwater sampling. The control panel includes a wireless internet-type telemetry system, which sends an email if a failure/alarm condition occurs. The telemetry system can be remotely assessed to periodically monitor system conditions that require prompt attention, such as changes in pressure, temperature, or airflow. The 28 IAS wells operate in four zones:

- Zone 1: AS0001 through AS0007
- Zone 2: AS0008 through AS0014
- Zone 3: AS0015 through AS0021
- Zone 4: AS0022 through AS0028

Electronically controlled solenoids operate the passage of compressed air to each individual zone. Zones 1 and 3 operate simultaneously and Zones 2 and 4 operate individually. During the monitoring period, the zones operated in individual cycles of four hours on (equivalent to run times of eight hours per day per zone). Zone 1 was turned off in August 2014 based on KSCRT decision given that concentrations within the AOI were below GCTLs in May 2014. Zone 1 was restarted in June 2015 based upon rebound in COC concentrations in MW0020 in May 2015. The IAS system operated more than 25,000 hours from initial startup in January 2012 through September 25, 2015 (when the system was shut down), or approximately 95 percent of the time as shown in Table 4-1. The shutdown system was secured on September 28, 2015, as requested by NASA, during the monthly OM&M event.

The 28 IAS wells operated at an average approximate flow rate of 2.8 standard cubic feet per minute (scfm) in IAS wells AS0001 to AS0007 (Zone 1) to 2 scfm in AS0008 to AS0014 (Zone 2). The pressures at IAS wells generally ranged from 10 to 26 pounds per square inch as shown in Table 4-2. The average airflow for each zone were as follows:

- Zone 1: AS0001 through AS0007
  - Average flow rate per well: 2.8 scfm
- Zone 2: AS0008 through AS0014

  - Average flow rate per well: 2 scfm
- Zone 3: AS0015 through AS0021
  - Average flow rate per well: 2.3 scfm
- Zone 4: AS0022 through AS0028
  - Average flow rate per well: 2.3 scfm

The field notes (Appendix A) contain monthly parameter readings for the Site during system operation, including flow rates, temperature readings, IAS pressures, DO readings, and system pressure/vacuum readings.

4.1.1 Dissolved-Oxygen Concentrations

Arcadis compared the monthly monitoring well operational data, as shown in Table 4-3, to baseline data to evaluate maximum changes in the DO concentrations in monitoring wells and influence (defined as a change of 1 milligram per liter [mg/L] in the DO oxygen concentration) from the IAS system. Arcadis elected to evaluate the maximum changes because the observed DO measurements are highly dependent upon how long a zone was operational when measurements were collected. Generally, Arcadis collected measurements from the zone in operation upon arrival. Then, Arcadis would cycle the system for approximately one hour prior to collecting measurements in subsequent zones. Therefore, the DO measured in the monitoring wells from these subsequent zones may not accurately represent full influence of the system during cyclical operation.

The maximum observed DO changes at M505 are summarized in Table 4-4. The data indicated maximum DO concentrations increased in 22 of the 25 monitoring wells measured at M505. The maximum observed DO concentrations increased to greater than 5 mg/L in 14 of the performance-monitoring wells. Five of the monitoring wells indicated a maximum observed DO concentrations of between 2 and 5 mg/L. The remaining three monitoring wells indicated a maximum observed DO concentrations between 1 and 2 mg/L.

4.1.2 Pressure Readings

Pressure readings were measured at select monitoring wells during the reporting period when the IAS system was operational, and the data are summarized in Table 4-3. The maximum observed pressure changes at M505 are summarized in Table 4-4. The data indicated that maximum positive pressure increases greater than 1 inch water column and/or artesian/bubbling conditions were observed in 16 of the 25 monitoring wells at M505.

Monitoring wells MW0024-035.0, MW0032-035.0, MW0033-025.0, MW0035-025.0, MW0036-035.0, MW0044-027.5.0, MW0042-035.0, MW0050-010.0, and MW0054-010.0 commonly demonstrated strong positive air pressure (greater than 9 inches of water

column), with MW0050 up to 40 feet from IAS wells. Changes in pressure readings in monitoring wells are usually attributed to varying the airflow rates of the nearby IAS wells.

4.1.3 Area of Influence

The estimated IAS AOI in September 2015 is shown on Figure 4-1 and is based on pressure gauge readings and DO concentrations at the monitoring wells and their distance to nearest IAS wells. The ROI in the subsurface zones was estimated as follows:

- Shallow zone (5 to 20 feet below land surface [bls]): 20 to 40 feet
- Intermediate-shallow zone (20 to 30 feet bls): 15 to 30 feet
- Intermediate zone (30 to 40 feet bls): 15 to 30 feet

Monitoring wells within the remediation system AOI commonly yielded increased DO concentrations (greater than 1.0 mg/L) and elevated pressure readings. Monitoring wells outside the AOI typically yielded low DO (less than 1 mg/L) and no pressure.

4.1.4 Routine Maintenance

Arcadis performed monthly routine maintenance on the system. This work generally included reviewing the system's operating data, cleaning or replacing air filters, replacing compressor lubrication oil, cleaning IAS system air monitoring gauges, testing inline solenoids, and other common preventive maintenance activities pertinent to the operation of the remediation system. The system was periodically shut down to perform routine and non-routine maintenance on the equipment and during groundwater-sampling activities.

4.1.5 Non-Routine Maintenance

Non-routine maintenance was required during the reporting period. Due to reduced airflow to multiple IAS wells observed during previous monitoring events, select IAS wells (AS0017, AS0018, AS0019, AS0020, AS0024, and AS0025) were redeveloped on August 6 and 19, 2014. The suspected cause of the restricted airflow was sediment fouling of the IAS well screens.

On August 24, 2015, the system automatically shut down. A non-routine troubleshooting visit was conducted and determined that the shutdown was due to a failed contact relay for the emergency stop button. A new contact relay was ordered and replaced on September 2, 2015, and the system was subsequently restarted.

4.2 Monitoring Well Sampling

Groundwater sampling for performance monitoring was conducted quarterly during August and November 2014 and February and September 2015 at between 18 and 26 monitoring wells. Annual groundwater performance monitoring was conducted in May 2015 and included sampling 36 monitoring wells. The list of performance-monitoring wells sampled is specified in Table 3-1.

The depth to water, DO, pH, conductivity, temperature, oxidation reduction potential, and turbidity were measured at each well during each sampling event. Groundwater monitoring well samples collected at M505 were analyzed for VOCs using USEPA Method 8260B. Groundwater sampling forms are included with the field notes in Appendix B. The laboratory analytical reports and chain of custody records are included in Appendix D.

4.2.1 Laboratory Quality Assurance/Quality Control

Laboratory-prepared trip blanks were generated prior to and collected post shipment of sample containers as part of the quality assurance/quality control sampling procedures during each sampling event. One equipment blank was collected during the May 2015 sampling event and was prepared using analyte-free, laboratory-grade water.

The laboratory analyzed the samples using the correct analytical methods. Laboratory quality assurance samples associated with the sampling activities indicated the laboratory samples were all within acceptable limits and no significant quality assurance issues were encountered. Details of the data-validation activities and associated data qualifications are provided in laboratory report narratives included in Appendix D.

4.2.2 Chemicals of Concern

The following sections discuss the groundwater-monitoring data for the current COCs. The current and historical monitoring well analytical results are summarized in Table 4-5 and shown on Figure 4-2. It should be noted that some monitoring well analytical data prior to 2010, and dating back to 1997, have been truncated from Table 4-5 for clarity.

4.2.2.1 Trichloroethene

The laboratory results for the reporting period indicated TCE was detected at concentrations exceeding the GCTL (3 µg/L). Four groundwater-monitoring wells exhibited concentrations of TCE exceeding the GCTL in September 2015—MW0013IS-025.5 (20 µg/L), MW0035-025.0 (3.9 µg/L), MW0039-032.5 (6.1 µg/L), and MW0042-035.0 (7.9 µg/L). For the reporting period, TCE concentrations in groundwater were not detected above the NADC of 300 µg/L.

4.2.2.2 cis-1,2-Dichloroethene

The laboratory results for the reporting period indicated cDCE was detected concentrations exceeding the GCTL of 70 µg/L. Five monitoring wells exhibited concentrations of cDCE in September 2015 exceeding the GCTL—MW0020-036.0 (120 µg/L), MW0025-025.0 (270 µg/L), MW0032-035.0 (220 µg/L), MW0035-025.0 (71 µg/L), and MW0049-027.5 (140 µg/L). For the reporting period, cDCE concentrations in groundwater were not detected above the NADC of 700 µg/L.

4.2.2.3 Vinyl Chloride

The laboratory results for the reporting period indicated VC was detected at concentrations exceeding the GCTL of 1.0 µg/L. The following groundwater performance-monitoring wells within the AOI exhibited concentrations of VC in September 2015 above the GCTL: MW0022-025.0 (7.3 µg/L), MW0032-035.0 (35 µg/L), MW0033-025.0 (11 µg/L), and MW0051-025.0 (8.3 µg/L). For the reporting period, VC concentrations in groundwater were not detected above the NADC of 100 µg/L.

Beyond the IAS AOI, three monitoring wells exhibited VC concentrations exceeding the GCTL of 1.0 µg/L in September 2015—MW0028-025.0 (50 µg/L), MW0057-025.0 (65 µg/L), and MW0059-025.0 (27 µg/L).

4.3 Groundwater Data Evaluation and Trend Analysis

This section summarizes evaluations of the COCs detected in groundwater for the reporting period.

4.3.1 COC Range of Detections and Reductions

Of the groundwater-monitoring wells within the AOI of the IAS system sampled during the reporting period, TCE concentrations ranged from non-detect to 20 µg/L, cDCE concentrations ranged from non-detect to 270 µg/L, and VC concentrations ranged from non-detect to 58 µg/L. Based on the September 2015 sampling data, 28 of 39 monitoring wells within the AOI are below the GCTLs.

A comparison of the baseline (pre-IAS system startup) and annual groundwater-sampling events for TCE, cDCE, and VC concentrations within the AOI of the IAS was conducted to evaluate system effectiveness in reducing COC concentrations. A summary of 18 select monitoring wells within the AOI of the IAS is shown in Table 4-6. In September 2015, COC concentrations in 11 monitoring wells (MW0013IS, MW0020, MW0022, MW0025, MW0032, MW0033, MW0035, MW0039, MW0042, MW0049, and MW0051) within the IAS AOI were greater than the GCTLs. In addition, the September 2015 sampling data indicated that three monitoring wells (MW0028, MW0057, and

MW0059) beyond the AOI exhibited VC concentrations greater than the GCTL. Reductions in average TCE, cDCE, and VC concentrations within the AOI since system operation commenced were 92, 89, and 85 percent, respectively.

The extents of TCE-, cDCE-, and VC-affected groundwater at concentrations greater than the GCTLs based on the annual sampling data (May 2015) are shown on Figure 4-3. A comparison of the areal extent of groundwater exceeding the GCTLs based of delineation presented as part of the Step 1 Engineering Evaluation (2010) and the September 2015 extent is presented on Figure 4-4. This comparison shows that the affected groundwater has been reduced 77 percent, from approximately 140,885 to 32,000 square feet (ft^2). The 32,000-ft^2 area includes 18,425 ft^2 of VC-affected groundwater that is beyond the AOI of the IAS system.

4.3.2 Trend Analysis

Since startup of the IAS system in January 2012, groundwater samples have been collected from 18 to 26 performance-monitoring wells quarterly and up to 49 monitoring wells annually. Based on the resulting data, an evaluation of COC trends in groundwater was conducted to assess system performance. Graphical representations of the monitoring results prior to and during system operation are presented in Appendix E.

In general at the M505 facility, concentrations of total VOCs within the influence of the remediation system have decreased since startup as shown in trend graphs for MW0023-025.0, MW0025-025.0, MW0032-035.0, MW0042-035.0, MW0044-027.5, MW0048-027.5, MW0051-025.0, and MW0055-025.0 (Appendix E). The general decreases in TCE, cDCE, and VC concentrations indicate that the COCs were reduced within the AOI of the system, as 28 monitoring wells demonstrated groundwater concentrations below the GCTLs during the September 2015 sampling event. However, rebounds in COC concentrations back above the GCTLs were observed in MW0013IS-025.0, MW0020-036.0, and MW0022-025.0 during the performance-monitoring period. The rebounds in MW0020-036.0 and MW0022-025.0 occurred during shutdown of this remediation zone after achieving GCTLs in this area. The rebound in MW0013IS-025.0 is suspected to be related to the change in groundwater flow direction as discussed in Section 4.4 below.

4.4 Groundwater Flow Direction

Historically, the groundwater flow directions in the shallow (midpoint of screen interval between 0 and 20 feet bls) and intermediate (midpoint of screen interval between 20 and 40 feet bls) groundwater zones were generally toward the south.

During the reporting period, the depths to water were measured in the monitoring wells and are summarized in Table 4-7. For the May 2015 annual sampling event, when the IAS system was temporarily shut down prior to sampling, the groundwater in the intermediate zone was flowing to the northwest in the northern part of the Site at a gradient of approximately 2.5×10^{-3} foot per foot (ft/ft) as shown on Figure 4-5. This is

inconsistent with historical data and the first observation of this flow path. In May 2015 at the southern portion of the Site, groundwater flow direction for the intermediate zone was generally to the south, with a southeastern component on the western portion of the Site and southwestern component on the eastern side of the Site. The approximate groundwater gradient of the southerly flow as shown on Figure 4-5 was also 2.5×10^{-3} ft/ft.

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5.0 CONCLUSIONS/RECOMMENDATIONS

The IAS system operated effectively and the AOI exceeded the 15-foot ROI design criteria, extending to 40 feet in some areas. As a result, the first milestone of the corrective action objective to reduce COC concentrations to below the NADCs has been achieved and maintained at M505. Concentrations of TCE, cDCE, and VC at M505 within the AOI have been reduced 92, 89, and 85 percent, respectively. In addition, the area of affected groundwater exceeding the GCTLs has been reduced approximately 77 percent. Based on data analyses, the trends in COC concentrations at the Site generally decreased within the AOI during Year 3 of operation. However, rebounds in COC concentrations back above the GCTLs were observed in MW0013IS-025.0, MW0020-036.0, and MW0022-025.0 during the performance-monitoring period. The rebounds in MW0020-036.0 and MW0022-025.0 occurred during shutdown of this remediation zone after achieving GCTLs in this area in Year 2. The rebound in MW0013IS-025.0 is suspected to be related to the change in groundwater flow direction in this area to the northeast; the rebound may also be attributed to increased rainfall during the 2015 summer.

The IAS system was shut down on September 25, 2015, and remains off per NASA's direction. As concentrations of COCs are below the NADCs and only remain above the GCTLs in 11 monitoring wells within the AOI of the IAS and 3 monitoring wells beyond the AOI, it is recommended that post-remediation monitoring of these 14 monitoring wells as shown in Table 4-8 be conducted semiannually for one year. After one year of post-remediation monitoring, the Site should be placed into the Industrial Area Long-Term Monitoring (LTM) Program. In conjunction with transition to the LTM Program, the monitoring plan should be re-evaluated to identify select monitoring wells and sampling frequency to evaluate natural attenuation progression. In addition, the Statement of Basis and Land Use Control Implementation Plan should be revised to reflect transition from active remediation to LTM.

During the December 2015 KSCRT meeting, the team concurred that the IAS should remain off and the Site transitioned to LTM following completion of semiannual post-remediation monitoring for one year. An excerpt of the minutes of the December 2015 KSCRT meeting is included as Appendix F. In addition, the KSCRT concurred with the proposed 14 monitoring wells for inclusion in the semiannual post-remediation monitoring.

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6.0 REFERENCES

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Table 3-1
Performance Monitoring Well Summary
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Monitoring Well	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM
MW0003-009.0		x	
MW0003-030.0		x	x
MW0004-009.0			x
MW0005-030.0			x
MW0007-009.0		x	
MW0007-030.0		x	x
MW0010-025.5		x	x
MW0013-025.5	x	x	x
MW0015-025.0		x	
MW0016-036.0		x	x
MW0018-036.0			x
MW0019-025.0	x		x
MW0020-036.0	x		x
MW0021-025.0			x
MW0023-025.0	x	x	x
MW0024-035.0	x	x	
MW0025-025.0	x	x	x
MW0026-035.0	x	x	
MW0027-025.0			x
MW0028-025.0			x
MW0029-025.0			x
MW0030-025.0			x
MW0032-035.0	x	x	x
MW0033-025.0	x	x	x
MW0035-025.0	x	x	x
MW0036-035.0	x	x	
MW0037-010.0		x	
MW0039-032.5			x
MW0040-025.0	x	x	x
MW0041-025.0	x	x	x
MW0042-035.0	x	x	x
MW0044-027.5			x
MW0045-034.5	x	x	x

Table 3-1
Performance Monitoring Well Summary
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Monitoring Well	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM
MW0048-027.5			x
MW0049-027.5			x
MW0050-010.0		x	
MW0051-025.0	x	x	x
MW0052-010.0	x	x	x
MW0053-010.0	x		x
MW0054-010.0		x	
MW0055-025.0		x	x
MW0056-010.0	x	x	x
MW0057-025.0			x
MW0058-010.0			x
MW0059-025.0			x

Notes:

APMR = Annual Performance Monitoring Report
LTM = long-term monitoring
M505 = Building M7-505 Waste Treatment Tank

Table 4-1
System Performance Summary
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Site Visit Date	Days Between Site Visits	Days Since Startup System Operational	Adjusted Days of Runtime [1,2,3]	IAS Hour Meter	IAS Treatment Days	IAS Percent Cumulative Runtime	System Status
1/6/12	0	0	0	-	-	-	3
1/9/12	3	3	0.0	-	-	-	3
1/10/12	1	4	0.0	-	-	-	3
1/11/12	1	5	0.0	0.6	0.03	-	3
1/13/12	2	7	1.0	20.5	0.85	85.4%	2
1/18/12	5	12	6.0	136.7	5.70	94.9%	1
1/26/12	8	20	14.0	324.0	13.50	96.4%	1
2/28/12	33	53	47.0	1044.5	43.5	92.6%	1
3/26/12	27	80	74.0	1690.6	70.4	95.2%	1
4/17/12	22	102	94.0	2179.3	90.8	96.6%	1 [1]
5/14/12	27	129	121.0	2824.1	117.7	97.2%	1
6/27/12	44	173	165.0	3668.7	152.9	92.6%	1
7/25/12	28	201	190.0	4013.7	167.2	88.0%	2 [1]
8/20/12	26	227	216.0	4524.6	188.5	87.3%	2
9/24/12	35	262	251.0	5316.4	221.5	88.3%	1
10/15/12	21	283	270.0	5708.0	237.8	88.1%	1 [1]
11/12/12	28	311	298.0	6335.0	264.0	88.6%	1
12/19/12	37	348	335.0	7228.0	301.2	89.9%	1
1/11/13	23	371	355.0	7653.7	318.9	89.8%	1 [1]
2/25/13	45	416	400.0	8732.4	363.9	91.0%	1
3/21/13	24	440	424.0	9307.8	387.8	91.5%	2
3/26/13	5	445	429.0	9315.6	388.2	90.5%	1
4/25/13	30	470	452.0	9913.7	413.1	91.4%	1 [1]
5/13/13	18	488	470.0	10229.7	426.2	90.7%	2
6/7/13	25	513	495.0	10815.9	450.7	91.0%	3 [2]
12/11/13	187	513	495.0	10815.9	450.7	91.0%	2
12/16/13	5	518	500.0	10930.2	455.4	91.1%	1
1/28/14	43	561	543.0	11962.4	498.4	91.8%	1
2/16/14	19	580	560.0	12419.8	517.5	92.4%	1 [1]
3/27/14	39	619	599.0	13253.1	552.2	92.2%	1
4/22/14	26	645	625.0	13878.1	578.3	92.5%	1
5/30/14	38	683	658.0	14708.0	612.8	93.1%	1 [1]

Table 4-1
System Performance Summary
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Site Visit Date	Days Between Site Visits	Days Since Startup System Operational	Adjusted Days of Runtime [1,2,3]	IAS Hour Meter	IAS Treatment Days	IAS Percent Cumulative Runtime	System Status
6/23/14	24	707	682.0	15285.6	636.9	93.4%	1
7/29/14	36	743	718.0	16145.5	672.7	93.7%	1
8/19/14	21	764	734.0	16477.5	686.6	93.5%	2 [3]
9/16/14	28	792	762.0	17082.9	711.8	93.4%	1
10/22/14	36	828	798.0	17945.4	747.7	93.7%	1
11/26/14	35	863	829.0	18683.8	778.5	93.9%	2 [3]
12/29/14	33	896	862.0	19479.0	811.6	94.2%	1
1/19/15	21	917	883.0	19975.8	832.3	94.3%	1
2/25/15	37	954	915.0	20714.8	863.1	94.3%	2 [3]
3/17/15	20	974	940.0	21195.9	883.2	94.0%	1
4/21/15	35	1009	970.0	22035.1	918.1	94.7%	1
5/20/15	29	1038	999.0	22649.8	943.7	94.5%	2 [3]
6/15/15	26	1064	1025.0	23252.1	968.8	94.5%	1
7/31/15	46	1110	1071.0	24355.5	1014.8	94.8%	1
8/24/15	24	1134	1095.0	24931.5	1038.8	94.9%	1
9/28/15	35	1169	1127.0	-	-	-	3

Notes:

Adjusted Days of Runtime = Days of runtime less the days the system was shutdown for routine maintenance

Treatment Days = Hour Meter divided by 24 hours per day

Percent Cumulative Runtime = Treatment Days divided by Adjusted Days of Runtime

[1.] Days adjusted for quarterly and annual visits to account for system shut down prior to and during sampling events in 4/12, 7/12, 10/12, 1/13, 4/13, 2/14, and 5/14. System was restarted after completion of sampling and O&M event conducted the following day.

[2.] Monthly operation and maintenance not performed. Date of system shut down due to loss of power. System not restarted.

[3.] Days adjusted for quarterly and annual visits to account for system shutdown at least 48-hours prior to and during sampling events in 8/14, 11/14, 2/15 and 5/15. System was restarted after completion of sampling and O&M event conducted the following day.

APMR = Annual Performance Monitoring Report

IAS = in situ air sparging

System Status Codes		
Code	Arrive	Depart
1	on	on
2	off	on
3	off	off
4	on	off

Table 4-2
Summary of Air Sparge Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	M505-AS0001	M505-AS0002	M505-AS0003	M505-AS0004	M505-AS0005	M505-AS0006	M505-AS0007
DIAMETER	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches	2 inches
WELL DEPTH	38.00	38.00	40.00	38.00	38.00	38.00	39.00
SCREEN INTERVAL	35.0-38.0	35.0-38.0	37.0-38.0	35.0-38.0	35.0-38.0	35.0-38.0	36.0-39.0
ZONE	1	1	1	1	1	1	1

Date	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)	Flow (scfm)	Pres (psi)
1/11/2012	4.5	16.0	3.5	16.5	4.0	16.5	4.2	16.0	4.6	16.0	4.6	15.5	4.7	15.0
1/13/2012	2.9	16.0	3.8	16.0	4.1	16.5	4.4	17.0	3.1	16.0	4.6	15.5	3.4	15.0
1/18/2012	4.2	15.0	2.5	15.0	3.0	15.5	4.3	16.0	4.2	15.0	4.2	14.5	4.0	14.5
1/26/2012	2.2	15.5	4.1	15.0	3.7	15.5	7.5	16.0	5.1	15.0	5.0	14.0	2.3	15.0
2/28/2012	6.5	17.0	6.8	17.0	3.2	17.0	4.1	17.0	5.0	15.0	6.0	16.0	5.7	17.0
3/26/2012	4.5	16.0	6.8	15.0	2.7	15.0	4.1	15.0	4.0	15.0	5.8	15.0	5.9	15.0
4/18/2012	4.6	17.0	3.5	16.0	2.5	16.0	3.5	17.0	6.0	16.0	5.0	15.0	3.3	16.0
5/14/2012	6.4	16.0	4.9	15.0	4.1	15.0	4.8	16.0	4.7	15.0	4.2	14.0	3.4	15.0
6/27/2012	3.8	17.0	5.8	16.5	3.7	17.0	7.5	17.0	4.2	16.5	5.0	16.0	4.1	17.0
7/25/2012	5.2	16.0	3.6	14.5	3.7	15.5	3.0	15.5	4.9	15.5	4.3	14.5	4.8	15.5
8/20/2012	3.9	17.0	4.9	16.0	2.9	17.0	3.7	17.0	4.7	17.0	4.8	16.0	4.4	17.0
9/24/2012	3.5	15.5	3.2	15.0	5.2	16.0	3.1	15.5	2.6	15.5	3.4	15.0	3.7	15.5
10/15/2012	3.6	15.0	3.3	15.0	4.7	16.5	2.9	15.0	2.6	15.0	3.1	15.0	3.2	15.5
11/12/2012	3.4	15.0	3.3	15.0	3.6	15.0	4.0	15.0	3.4	15.0	3.6	14.0	3.3	16.0
12/19/2012	3.6	14.5	3.4	14.0	3.8	15.0	4.0	14.5	3.3	14.8	3.8	14.0	3.2	15.5
1/11/2013	3.5	14.0	3.5	14.0	4.0	15.0	3.9	14.0	4.1	15.0	4.1	14.0	4.1	15.0
2/25/2013	3.3	14.5	3.4	14.0	3.8	14.5	3.0	14.0	3.0	15.0	3.7	13.0	3.1	15.0
3/21/2013	3.4	15.0	3.6	15.0	4.1	15.0	2.8	15.0	3.4	15.0	3.8	15.0	Off Line	
4/25/2013	4.6	15.0	5.0	17.0	5.0	16.5	4.0	15.0	4.5	17.0	4.2	16.0	Off Line	
5/13/2013	4.3	17.0	4.8	17.0	3.9	17.5	2.9	16.0	4.1	17.5	3.7	16.0	Off Line	
12/11/2013	4.1	15.0	3.8	16.0	4.1	18.0	4.2	17.0	3.2	18.0	5.5	18.0	Off Line	
12/16/2013	3.3	16.0	5.6	16.0	5.0	16.0	4.3	15.5	2.3	17.0	6.0	16.5	Off Line	
1/28/2014	3.0	13.0	2.4	14.0	2.5	15.0	1.8	15.0	3.8	15.0	2.8	15.0	Off Line	
2/20/2014	2.6	13.0	4.2	15.0	3.8	15.0	1.0	16.0	5.6	15.0	5.2	15.5	Off Line	
3/27/2014	5.6	15.0	4.5	15.0	4.5	16.0	1.0	17.0	1.0	16.5	4.7	15.0	Off Line	
4/22/2014	4.8	14.0	4.5	14.0	3.0	15.0	0.0	16.0	0.0	16.0	3.1	14.0	Off Line	
5/30/2014	5.5	14.0	5.3	14.0	4.1	17.0	0.0	18.0	0.0	17.5	3.5	15.5	Off Line	
6/23/2014	4.4	12.0	3.5	13.0	3.6	15.0	0.0	16.0	0.0	16.0	3.2	14.0	Off Line	
7/29/2014	3.7	12.0	3.9	15.0	3.5	17.0	0.0	19.0	0.0	18.5	2.9	16.0	Off Line	
8/19/2014	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
9/16/2014	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
10/22/2014	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
11/26/2014	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
12/29/2014	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
1/19/2015	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
2/25/2015	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
3/17/2015	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
4/21/2015	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
5/20/2015	Off Line		Off Line		Off Line		Off Line		Off Line		Off Line		Off Line	
6/15/2015	2.9	12.0	2.8	15.0	2.9	15.0	0.0	21.0	0.0	22.0	Off Line		Off Line	
7/31/2015	2.1	16.0	2.0	15.0	2.1	17.0	0.0	26.0	0.0	26.0	Off Line		Off Line	
8/24/2015	2.0	11.0	2.0	10.0	1.9	16.0	0.0	23.0	0.0	25.0	Off Line		Off Line	

Table 4-2
Summary of Air Sparge Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	M505-AS0008		M505-AS0009		M505-AS0010		M505-AS0011		M505-AS0012		M505-AS0013		M505-AS0014	
DIAMETER	2 inches		2 inches		2 inches		2 inches		2 inches		2 inches		2 inches	
WELL DEPTH	38.00		38.00		37.00		36.00		36.00		35.00		35.00	
SCREEN INTERVAL	35.0-38.0		35.0-38.0		34.0-37.0		33.0-36.0		33.0-36.0		32.0-35.0		32.0-35.0	
ZONE	2		2		2		2		2		2		2	
Date	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**
1/11/2012	4.9	15.0	5.1	18.0	4.6	18.0	5.6	15.0	6.0	15.0	6.2	18.0	6.4	17.0
1/13/2012	5.8	16.0	6.2	16.5	6.0	17.5	6.2	16.0	5.5	15.5	4.9	16.0	5.5	15.5
1/18/2012	6.0	15.0	6.1	15.5	6.1	19.0	6.0	15.0	6.0	14.5	6.0	15.0	6.0	15.0
1/26/2012	5.2	15.0	6.0	15.0	6.8	16.5	5.4	15.0	5.6	14.0	5.8	14.5	6.7	15.0
2/28/2012	5.5	15.0	6.7	15.0	7.1	18.0	5.1	15.0	5.6	15.0	6.0	15.0	6.6	15.0
3/26/2012	4.4	12.0	6.2	13.5	8.2	16.0	6.3	13.5	5.4	13.0	5.7	13.0	6.9	14.0
4/18/2012	6.7	18.0	4.1	18.0	5.6	20.0	4.1	16.0	4.5	15.0	6.3	17.0	4.6	16.0
5/14/2012	5.8	13.0	5.9	14.0	5.4	16.5	5.2	13.0	5.5	13.5	5.3	13.0	5.3	13.5
6/27/2012	5.3	17.0	5.2	17.0	5.0	19.0	4.6	17.0	4.8	17.0	5.0	16.5	4.8	16.5
7/25/2012	5.2	15.0	4.9	15.0	6.7	18.0	4.5	14.0	5.2	14.0	5.3	14.0	4.5	15.0
8/20/2012	4.9	15.0	5.0	15.5	6.7	17.5	5.8	15.0	4.9	14.0	6.3	15.0	3.4	15.0
9/24/2012	5.0	15.0	6.0	16.5	5.7	18.5	4.6	14.0	4.6	13.5	4.4	15.0	5.0	15.0
10/15/2012	5.2	16.0	6.0	17.0	6.0	18.5	4.6	15.0	4.6	14.5	4.5	15.0	5.2	15.0
11/12/2012	2.9	14.0	3.5	15.0	2.9	16.0	3.5	13.0	3.8	13.0	3.4	14.0	3.2	14.0
12/19/2012	3.0	13.0	3.3	14.8	2.6	15.0	3.1	13.0	3.6	12.5	3.5	13.3	3.5	13.0
1/11/2013	3.8	13.5	3.0	15.0	2.2	15.0	3.8	13.0	3.7	13.0	4.1	14.0	3.9	13.0
2/25/2013	3.6	13.0	3.4	14.0	2.8	15.0	3.7	12.5	3.6	12.0	3.7	13.5	3.0	13.0
3/21/2013	4.4	14.0	3.7	15.5	3.1	15.5	3.6	13.5	3.4	13.0	4.1	14.0	3.7	14.0
4/25/2013	<1	26.5	5.4	16.0	5.4	18.0	5.5	14.0	5.5	14.5	2.0	25.5	4.8	23.5
5/13/2013	0.0	27.0	6.0	17.0	8.0	18.0	5.0	14.5	5.3	14.0	0.0	26.0	2.3	26.5
12/11/2013	Broken		6.5	19.0	6.2	18.0	5.6	15.0	5.8	15.0	4.0	18.0	2.0	18.0
12/16/2013	Broken		8.2	18.0	7.2	19.0	5.6	15.0	6.0	15.0	6.2	18.5	1.0	19.0
1/28/2014	Broken		9.5	20.0	9.0	21.0	6.2	16.0	6.8	16.0	2.0	20.0	2.0	21.0
2/20/2014	Broken		7.1	19.5	7.2	20.0	7.7	18.0	7.1	18.0	1.0	19.5	1.0	19.5
3/27/2014	Broken		9.2	19.0	9.4	19.0	10.0	17.0	8.8	16.0	1.0	19.5	1.0	19.5
4/22/2014	Broken		7.7	19.0	7.9	20.0	7.6	18.0	7.3	12.0	0.0	20.0	0.0	20.0
5/30/2014	Broken		7.5	18.0	7.5	19.0	7.3	16.0	7.8	15.0	0.0	18.0	0.0	19.0
6/23/2014	Broken		7.0	19.0	7.2	19.0	7.2	17.0	7.0	17.0	0.0	18.0	0.0	19.0
7/29/2014	Broken		7.5	18.0	7.5	19.0	6.4	16.0	8.0	17.0	0.0	22.0	0.0	22.0
8/19/2014	Broken		Off Line		1.9	15.0	2.7	13.0	3.8	13.0	0.0	15.0	4.0	15.0
9/16/2014	Broken		Off Line		3.1	16.0	3.2	14.0	4.0	15.0	0.0	17.0	5.2	16.0
10/22/2014	Broken		Off Line		NM	NM	1.8	13.5	2.0	13.5	0.0	14.0	1.0	14.0
11/26/2014	Broken		Off Line		2.0	18.0	3.0	15.5	3.0	16.0	< 1.0	17.0	3.0	17.0
12/29/2014	Broken		Off Line		0.0	13.0	2.0	13.0	1.5	13.0	0.0	13.0	1.2	12.0
1/19/2015	Broken		Off Line		1.3	15.0	3.2	13.0	2.8	13.0	1.0	15.0	4.2	14.0
2/25/2015	Broken		Off Line		Off Line		2.5	1.3	2.0	13.0	0.0	13.0	0.0	12.0
3/17/2015	Broken		Off Line		Off Line		2.2	12.0	1.7	12.0	<1	13.0	1.3	11.0
4/21/2015	Broken		Off Line		Off Line		2.9	13.0	2.2	13.0	<1	12.0	<1	12.0
5/20/2015	Broken		Off Line		Off Line		2.4	12.0	2.4	12.0	<1	20.0	Broken	
6/15/2015	Broken		Off Line		1.6	13	1.7	13.0	1.5	11.0	0.0	15.0	Broken	
7/31/2015	Broken		Off Line		2.4	15	2.3	15.0	2.3	15.0	1.4	17.0	Broken	
8/24/2015	Broken		Off Line		<1	10	2.0	12.0	1.9	13.0	0.0	15.0	Broken	

Table 4-2
Summary of Air Sparge Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	M505-AS0015		M505-AS0016		M505-AS0017		M505-AS0018		M505-AS0019		M505-AS0020		M505-AS0021	
DIAMETER	2 inches		2 inches		2 inches		2 inches		2 inches		2 inches		2 inches	
WELL DEPTH	35.00		35.00		35.00		35.00		35.00		35.00		35.00	
SCREEN INTERVAL	32.0-35.0		32.0-35.0		32.0-35.0		32.0-35.0		32.0-35.0		32.0-35.0		32.0-35.0	
ZONE	3		3		3		3		3		3		3	
Date	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**
1/11/2012	5.0	14.5	4.6	15.0	3.2	15.5	4.0	15.0	5.0	14.5	4.8	14.5	3.2	14.0
1/13/2012	4.9	14.0	4.4	16.0	4.9	16.0	4.1	16.0	4.4	15.0	3.6	16.0	3.7	14.5
1/18/2012	5.0	15.0	4.6	15.5	4.0	15.0	3.4	16.0	5.2	15.0	3.9	16.5	5.0	15.0
1/26/2012	3.7	13.0	2.1	15.0	2.5	14.0	5.0	14.0	3.8	14.0	3.4	15.0	3.5	13.0
2/28/2012	4.8	15.0	5.2	17.0	4.8	16.5	3.3	16.5	3.7	16.0	4.0	17.0	3.7	16.0
3/26/2012	4.5	13.5	6.8	14.0	2.6	14.5	4.5	14.0	3.3	14.5	4.8	15.0	1.8	13.5
4/17-18/2012	5.3	14.0	4.3	15.0	2.2	15.5	3.5	15.0	3.5	15.0	4.3	16.0	2.0	14.0
5/14/2012	5.5	13.5	4.2	15.0	2.2	15.5	4.9	14.5	2.1	15.0	4.0	16.0	2.0	14.0
6/27/2012	4.1	15.0	4.9	16.5	2.3	16.5	3.6	15.5	1.6	16.0	2.4	17.0	1.6	15.5
7/25/2012	5.4	15.0	4.9	16.0	3.5	16.0	3.5	15.0	2.2	15.5	3.3	16.5	2.2	15.0
8/20/2012	4.6	15.0	4.3	16.0	3.0	16.0	2.9	15.0	2.5	15.0	4.0	16.0	2.0	15.0
9/24/2012	3.3	14.0	0.0	0.0	6.5	17.0	5.0	16.5	3.1	16.5	2.9	17.5	3.8	16.5
10/15/2012	4.4	14.0	0.0	0.0	3.2	19.0	5.8	18.0	2.4	18.0	2.2	18.0	5.0	17.5
11/12/2012	3.7	13.5	3.9	13.5	3.8	15.5	3.5	15.0	1.2	15.5	3.6	16.0	3.3	14.0
12/19/2012	3.7	13.0	3.6	13.0	3.3	15.0	3.3	14.5	0.0	15.0	3.8	15.5	3.3	14.0
1/11/2013	3.5	12.5	3.4	13.0	3.5	16.0	2.3	16.0	<1.0	15.0	1.9	15.5	3.7	13.5
2/25/2013	3.4	13.0	2.8	13.0	3.7	15.5	4.0	15.0	3.9	15.0	3.4	15.0	5.0	14.0
3/21/2013	3.4	13.5	2.8	14.0	3.9	16.5	5.2	16.0	2.9	16.0	3.1	16.0	5.8	15.5
4/25/2013	5.2	14.5	5.3	15.0	5.8	21.0	2.6	20.5	2.0	20.0	3.6	21.5	8.0	19.0
5/13/2013	4.4	14.5	4.5	15.0	4.0	19.0	2.3	18.5	2.0	19.0	4.3	17.0	4.1	16.5
12/11/2013	4.0	15.0	3.4	18.0	3.2	18.0	1.8	18.0	3.5	18.0	3.3	18.0	3.0	15.0
12/16/2013	3.8	13.5	3.1	14.0	4.0	17.0	2.5	17.0	1.3	17.0	3.5	17.0	2.9	16.0
1/28/2014	4.5	12.0	4.2	12.0	2.1	16.0	2.8	15.5	2.4	16.0	5.0	15.5	4.1	13.5
2/20/2014	4.2	13.0	4.0	13.0	2.2	17.0	2.0	16.5	3.2	16.0	4.8	17.0	5.0	13.5
3/27/2014	6.0	17.0	4.3	15.0	2.4	18.0	1.2	18.0	2.8	18.0	5.0	18.0	4.6	15.0
4/22/2014	0.0	16.0	3.0	13.0	1.2	17.0	0.0	16.0	1.6	16.0	1.6	17.0	4.0	15.0
5/30/2014	8.4	16.0	3.1	14.5	1.5	17.0	1.5	16.0	2.5	16.0	3.0	17.0	3.0	15.0
6/23/2014	0.0	15.0	2.6	13.0	1.4	16.0	0.0	15.0	2.2	16.0	3.4	16.0	3.8	13.0
7/29/2014	6.4	18.0	2.2	15.0	2.0	19.0	1.4	18.0	2.5	18.0	4.7	19.0	5.0	15.0
8/19/2014	3.2	12.0	3.0	13.0	4.0	20.0	3.4	25.0	2.0	25.0	4.0	23.0	4.0	13.0
9/16/2014	0.0	12.0	0.0	9.5	3.0	19.0	2.8	26.0	2.9	17.0	5.7	21.0	1.5	12.0
10/22/2014	1.0	13.0	2.0	13.0	Offline	13.5	Offline	13.0	Offline	13.0	Offline	13.0	Offline	9.0
11/26/2014	3.0	17.0	3.0	16.0	3.0	22.0	3.0	23.0	3.0	19.0	3.2	20.0	3.0	17.0
12/29/2014	3.0	13.0	2.8	13.0	0.5	22.0	4.4	21.0	3.4	18.0	3.0	14.0	3.0	12.0
1/19/2015	0.0	11.0	0.0	14.0	1.2	23.0	1.2	22.0	2.2	21.0	3.9	20.0	1.9	13.5
2/25/2015	2.8	17.0	2.8	16.0	2.0	25.0	1.4	24.0	2.5	23.0	3.2	16.0	3.2	16.0
3/17/2015	2.0	14.0	2.0	13.0	2.0	20.0	4.9	19.5	4.7	17.0	2.6	19.0	2.7	14.0
4/21/2015	2.0	12.0	2.5	12.0	1.6	21.0	<1	21.0	2.8	20.0	5.4	19.0	4.9	15.0
5/20/2015	2.1	11.0	2.2	14.0	2.5	19.0	2.5	21.0	1.5	22.0	2.3	16.0	2.3	10.0
6/15/2015	2.0	14.0	2.0	15.0	2.1	16.0	1.8	18.0	<1	18.0	1.6	20.0	2.0	16.0
7/31/2015	2.1	16.0	2.2	17.0	2.0	16.0	0.0	21.0	0.0	20.0	1.0	22.0	1.9	15.0
8/24/2015	2.0	12.0	2.2	11.0	2.0	17.0	1.8	18.0	0.0	18.0	1.6	20.0	2.0	12.0

Table 4-2
Summary of Air Sparge Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	M505-AS0022		M505-AS0023		M505-AS0024		M505-AS0025		M505-AS0026		M505-AS0027		M505-AS0028	
DIAMETER	2 inches		2 inches		2 inches		2 inches		2 inches		2 inches		2 inches	
WELL DEPTH	42.00		39.00		38.00		33.00		33.00		35.00		35.00	
SCREEN INTERVAL	40.5-42.0		37.5-39.0		36.5-38.0		31.5-33.0		31.5-33.0		33.5-35.0		33.5-35.0	
ZONE	4		4		4		4		4		4		4	
Date	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**	**Flow (scfm)**	**Pres (psi)**
12/11/2013	5.0	18.0	5.0	16.0	2.8	19.0	4.7	16.0	5.0	14.0	4.0	14.0	5.0	14.0
12/16/2013	6.6	17.0	4.3	16.0	4.0	18.0	3.7	16.0	2.7	12.0	4.1	13.0	4.8	14.0
1/28/2014	6.8	17.0	6.0	15.0	4.0	18.0	2.8	18.0	5.0	13.0	4.8	15.0	4.4	16.0
2/20/2014	6.2	18.0	5.2	19.0	3.5	16.0	3.8	16.0	4.0	15.0	4.5	16.0	4.0	18.0
3/27/2014	6.3	19.0	6.2	19.0	5.0	17.5	4.2	20.0	4.7	18.0	4.6	18.5	4.8	19.0
4/22/2014	6.5	18.0	7.1	19.0	2.1	22.0	0.0	23.0	6.0	15.0	5.0	14.0	5.4	17.0
5/30/2014	6.0	17.0	6.2	19.0	0.0	20.0	0.0	23.0	6.8	13.0	4.0	15.0	5.0	17.0
6/23/2014	6.0	18.0	6.0	18.0	0.0	21.0	0.0	22.0	6.4	15.0	4.2	16.0	4.4	18.0
7/29/2014	6.4	18.0	6.4	18.0	0.0	21.0	0.0	18.0	6.4	15.0	4.2	14.0	4.2	18.0
8/19/2014	2.1	18.0	0.0	19.0	0.0	26.0	5.0	25.0	5.0	17.0	5.5	16.0	5.1	18.0
9/16/2014	1.1	16.0	7.4	21.0	0.0	27.0	2.3	26.0	1.3	0.0	5.0	15.0	4.4	19.0
10/22/2014	0.0	15.0	1.8	20.0	0.0	27.0	3.8	25.0	5.0	24.0	4.5	16.0	3.8	18.0
11/26/2014	3.5	20.0	3.0	22.0	< 1.0	23.0	< 1.0	25.0	4.0	16.0	3.8	16.0	2.8	20.0
12/29/2014	2.6	16.0	3.2	22.0	<1.0	28.0	<1.0	29.0	3.0	10.0	2.5	17.0	2.2	18.0
1/19/2015	2.0	16.0	2.0	22.0	<1.0	29.0	<1.0	30.0	2.0	5.0	2.0	16.0	2.0	18.0
2/25/2015	3.9	16.0	3.9	20.0	1.2	25.0	1.2	26.0	3.7	16.0	3.9	18.0	4.0	18.0
3/17/2015	3.1	16.0	3.2	22.0	2.0	26.0	0.0	28.0	3.2	10.0	1.9	26.0	2.8	20.0
4/21/2015	3.0	16.0	2.7	20.0	<1	28.0	<1	30.0	3.5	14.0	<1	30.0	2.5	22.0
5/20/2015	2.0	14.0	2.0	19.0	<1	29.0	<1	30.0	2.0	6.0	1.5	30.0	1.6	28.0
6/15/2015	2.4	15.0	2.0	20.0	0.0	25.0	2.1	20.0	2.2	0.0	0.0	28.0	1.0	22.0
7/31/2015	1.9	16.0	2.0	20.0	0.0	25.0	1.9	27.0	2.0	17.0	2.0	25.0	2.2	25.0
8/24/2015	2.0	16.0	2.0	20.0	0.0	24.0	0.0	26.0	2.0	NF	2.2	18.0	2.1	25.0

Notes:
Zone 1 (AS0001 through AS0007)
Zone 2 (AS0008 through AS0014)
Zone 3 (AS0015 through AS0021)
Zone 4 (AS0022 through AS0028)
Depth and screen interval in feet below land surface.
NF = gauge not functioning
NM = not measured
psi = pounds per square inch
scfm = standard cubic feet per minute

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0003S-009.0				MW0003I-030.0				MW0005S-009.0				MW0005I-030.0				MW0007-009.0			
DIAMETER	2 inch				2 inch				2 inch				2 inch				2 inch			
WELL DEPTH	14 ft.bls				35 feet				14 ft.bls				35 feet				14 ft.bls			
SCREEN INTERVAL	4 -14 ft.bls				25 - 35 ft.bls				4 -14 ft.bls				25 - 35 ft.bls				4 -14 ft.bls			
TOC ELEVATION	9.64				9.60				9.23				9.41				9.15			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	--	--	--	--	--	--	--	--	2.33	6.90	0.18	NM	2.52	6.89	2.75	NM	--	--	--	--
1/13/2012	--	--	--	--	--	--	--	--	--	NM	NM	NM	--	NM	NM	NM	--	--	--	--
1/18/2012	--	--	--	--	--	--	--	--	--	NM	NM	NM	--	NM	NM	NM	--	--	--	--
1/26/2012	--	--	--	--	--	--	--	--	--	NM	NM	NM	--	NM	NM	NM	--	--	--	--
2/28/2012	--	--	--	--	--	--	--	--	4.23	5.00	2.54	+2.54 B	3.43	5.98	0.66	0.00	--	--	--	--
3/26/2012	--	--	--	--	--	--	--	--	2.85	6.38	1.44	+2.62	3.12	6.29	0.19	+0.21	--	--	--	--
4/18/2012	--	--	--	--	--	--	--	--	4.87	4.36	0.16	+1.42	5.11	4.30	0.14	+0.77	--	--	--	--
5/15/2012	--	--	--	--	--	--	--	--	1.32	7.91	1.01	+0.69	1.46	7.95	0.51	+5.71	--	--	--	--
6/27/2012	--	--	--	--	--	--	--	--	4.73	4.50	1.33	+4.11	4.68	4.73	0.31	+0.29	--	--	--	--
7/25/2012	--	--	--	--	--	--	--	--	4.50	4.73	3.77	0.00	4.57	4.84	0.35	0.00	--	--	--	--
8/20/2012	--	--	--	--	--	--	--	--	3.34	5.89	3.27	+0.83	3.35	6.06	0.75	0.00	--	--	--	--
9/24/2012	--	--	--	--	--	--	--	--	3.68	5.55	4.59	+0.30	3.77	5.64	1.18	+3.97	--	--	--	--
10/15/2012	--	--	--	--	--	--	--	--	3.26	5.97	2.27	0.00	3.50	5.91	1.94	0.00	--	--	--	--
11/12/2012	--	--	--	--	--	--	--	--	2.78	6.45	5.92	+1.01	2.99	6.42	0.91	0.00	--	--	--	--
12/20/2012	--	--	--	--	--	--	--	--	2.54	6.69	5.67	+1.03	2.76	6.65	1.71	+0.13	--	--	--	--
1/11/2013	--	--	--	--	--	--	--	--	--	NM	NM	NM	3.29	6.12	1.91	0.00	--	--	--	--
2/25/2013	--	--	--	--	--	--	--	--	1.81	7.42	2.74	+1.17	2.03	7.38	3.34	0.00	--	--	--	--
3/21/2013	--	--	--	--	--	--	--	--	1.76	7.47	2.88	+0.75	1.97	7.44	3.34	0.00	--	--	--	--
4/25/2013	--	--	--	--	--	--	--	--	3.56	5.67	4.10	+3.4	3.62	5.79	3.14	0.00	--	--	--	--
5/13/2013	--	--	--	--	--	--	--	--	4.05	5.18	2.68	0.00	4.21	5.20	2.11	+4.83	--	--	--	--
12/16/2013	2.68	6.96	0.27	NM	2.77	6.83	0.46	0.00	2.52	6.71	2.16	0.00	2.60	6.81	0.85	0.00	3.30	5.85	2.16	0.00
1/28/2014	2.39	7.25	0.38	0.00	2.23	7.37	0.45	0.00	2.32	6.91	1.29	0.00	2.56	6.85	2.63	0.00	3.00	6.15	1.79	0.00
2/20/2014	2.71	6.93	0.33	0.00	2.01	7.59	0.40	0.00	4.33	4.90	5.39	+0.80	4.51	4.90	3.68	0.00	2.86	6.29	1.66	0.00
3/27/2014	2.93	6.71	0.22	0.00	2.82	6.78	0.41	0.00	2.31	6.92	2.32	+0.12	2.48	6.93	2.97	+0.26	3.18	5.97	0.64	0.00
4/22/2014	--	--	--	--	--	--	--	--	2.09	7.14	4.10	0.00	2.37	7.04	3.36	0.00	4.02	5.13	2.49	+0.13
5/30/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/19/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/22/2014	--	--	--	--	--	--	--	--	3.03	6.20	0.46	+0.37	--	A	--	--	3.85	5.30	0.24	0.00
11/26/2014	4.26	5.38	0.47	0.00	4.65	4.95	0.59	0.00	--	--	--	--	--	--	--	--	5.75	3.40	0.59	0.00
12/29/2014	3.67	5.97	0.01	0.00	3.30	6.30	0.00	0.00	--	--	--	--	--	--	--	--	4.08	5.07	0.00	0.00
1/19/2015	3.63	6.01	1.05	0.00	3.54	6.06	0.92	0.00	--	--	--	--	--	--	--	--	3.94	5.21	0.82	0.00
2/25/2015	3.65	5.99	0.63	0.00	3.25	6.35	0.99	0.00	--	--	--	--	--	--	--	--	4.02	5.13	0.65	0.00
3/17/2015	3.39	6.25	0.16	0.00	2.43	7.17	0.19	0.00	--	--	--	--	--	--	--	--	3.71	5.44	0.38	0.00
4/21/2015	2.84	6.80	0.39	0.00	2.37	7.23	0.43	0.00	--	--	--	--	--	--	--	--	3.92	5.23	0.58	0.00
5/20/2015	2.46	7.18	0.49	0.00	1.97	7.63	0.61	0.00	--	--	--	--	--	--	--	--	2.99	6.16	0.98	0.00
6/15/2015	2.53	7.11	0.10	0.00	2.28	7.32	0.04	0.00	--	--	--	--	--	--	--	--	3.07	6.08	0.13	0.00
7/31/2015	3.09	6.55	0.12	0.00	2.94	6.66	0.16	0.00	--	--	--	--	--	--	--	--	4.12	5.03	0.12	0.00
8/24/2015	3.44	6.20	0.25	0.00	2.72	6.88	0.18	0.00	--	--	--	--	--	--	--	--	3.70	5.45	0.16	0.00

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0007-030.0				MW0010-025.5				MW0013-025.5				MW0015-025.0				MW0016-036.0			
DIAMETER	2 inch				2 inch				2 inch				1 inch				1 inch			
WELL DEPTH	35 ft.bls				28 ft.bls				28 ft.bls				27.5 ft.bls				38.5 ft.bls			
SCREEN INTERVAL	25 -35 ft.bls				23- 28 ft.bls				23 - 28 ft.bls				22.5 - 27.5 ft.bls				33.5 - 38.5 ft.bls			
TOC ELEVATION	9.19				9.27				9.52				9.08				8.91			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	--	--	--	--	--	--	--	--	--	--	--	--	2.35	6.73	0.70	NM	2.35	6.56	1.05	NM
1/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	5.10	3.98	NM	0.00	5.04	3.87	NM	0.00
1/18/2012	--	--	--	--	--	--	--	--	--	--	--	--	4.45	4.63	0.54	0.00	4.34	4.57	0.33	0.00
1/26/2012	--	--	--	--	--	--	--	--	--	--	--	--	4.12	4.96	0.65	0.00	--	A	--	--
2/28/2012	--	--	--	--	--	--	--	--	--	--	--	--	3.59	5.49	6.09	0.00	--	A	--	--
3/26/2012	--	--	--	--	--	--	--	--	--	--	--	--	3.25	5.83	7.40	+5.5	--	A	--	--
4/18/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
5/15/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
6/27/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
7/25/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
8/20/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
9/24/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
10/15/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
11/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
12/20/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
1/11/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
2/25/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
3/21/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
4/25/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
5/13/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	A	--	--	--	A	--	--
12/16/2013	4.29	4.90	1.20	0.00	4.21	5.06	1.43	0.00	4.82	4.70	5.28	0.00	--	A	--	--	--	A	--	--
1/28/2014	3.44	5.75	3.52	0.00	3.18	6.09	4.24	0.00	4.16	5.36	7.66	0.00	--	A	--	--	--	A	--	--
2/20/2014	3.19	6.00	2.15	0.00	3.11	6.16	2.81	0.00	5.41	4.11	8.85	+0.80 B	--	A	--	--	--	A	--	--
3/27/2014	4.29	4.90	3.51	0.00	4.26	5.01	4.43	+0.15	4.75	4.77	7.32	+0.12	0.88	8.20	7.07	+0.84 B	--	A	--	--
4/22/2014	3.88	5.31	3.48	+0.37	--	--	--	--	4.26	5.26	9.03	0.15	--	--	--	--	--	A	--	--
5/30/2014	2.77	6.42	1.67	+0.36	2.92	6.35	6.46	0.00	Under parked RV				--	A	--	--	--	A	--	--
7/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/19/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/22/2014	3.86	5.33	0.29	+4.00	3.88	5.39	4.37	+0.29	3.40	6.12	3.72	0.00	--	--	--	--	--	--	--	--
11/26/2014	5.36	3.83	3.40	+0.70	5.28	3.99	0.58	+1.50	6.10	3.42	3.38	0.00	--	A	--	--	--	A	--	--
12/29/2014	4.21	4.98	3.36	+0.23	4.02	5.25	4.31	+3.27	4.35	5.17	6.08	0.00	3.39	5.69	3.51	0.88	3.30	5.61	2.57	+0.88
1/19/2015	4.68	4.51	4.32	+0.11	4.59	4.68	4.47	+2.44	4.84	4.68	6.98	+0.13	2.73	6.35	4.60	0.00	2.79	6.12	5.25	0.00
2/25/2015	4.65	4.54	4.52	+0.62	4.60	4.67	5.22	+0.78	5.06	4.46	8.19	+0.13	3.69	5.39	4.26	0.00	3.80	5.11	5.17	0.00
3/17/2015	3.59	5.60	3.06	+0.18	3.57	5.70	5.37	+0.29	3.57	5.95	6.93	0.00	2.78	6.30	5.78	+0.19	--	A	--	--
4/21/2015	3.43	5.76	0.96	+0.18	3.37	5.90	2.55	+0.18	3.35	6.17	5.08	0.00	2.74	6.34	3.34	0.00	2.76	6.15	3.50	0.00
5/20/2015	2.47	6.72	1.08	0.00	2.44	6.83	5.23	0.00	2.44	7.08	5.99	0.00	1.86	7.22	1.01	0.00	1.93	6.98	3.78	0.00
6/15/2015	2.47	6.72	0.76	0.16	2.45	6.82	1.45	0.00	2.51	7.01	5.36	0.00	2.62	6.46	0.18	1.02	--	A	--	0.00
7/31/2015	3.59	5.60	0.13	0.00	3.57	5.70	0.09	0.00	--	--	--	--	--	--	--	--	--	--	--	--
8/24/2015	3.17	6.02	0.07	0.00	3.14	6.13	0.11	0.00	--	--	--	--	2.58	6.50	0.73	0.00	1.93	6.30	1.13	1.63

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0017-025.0				MW0018-036.0				MW0019-025.0				MW0020-036.0				MW0022-025.0			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	27.5 ft.bls				38.5 ft.bls				27.5 ft.bls				38.5 ft.bls				27.5 ft.bls			
SCREEN INTERVAL	22.5 - 27.5 ft.bls				33.5 - 38.5 ft.bls				22.5 - 27.5 ft.bls				33.5 - 38.5 ft.bls				22.5 - 27.5 ft.bls			
TOC ELEVATION	9.30				9.20				9.28				9.07				9.45			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	2.28	7.02	NM	NM	2.30	6.90	1.36	NM	2.34	6.94	0.92	NM	2.32	6.75	2.22	NM	2.32	7.13	1.33	NM
1/13/2012	--	NM	NM	NM	--	NM	NM	NM	5.53	3.75	NM	+0.20	5.32	3.75	NM	+0.15	4.92	4.53	NM	0.00
1/18/2012	6.05	3.25	0.93	0.00	6.51	2.69	5.68	0.00	6.18	3.10	0.37	0.00	5.98	3.09	0.39	0.00	5.16	4.29	2.80	0.00
1/26/2012	4.08	5.22	0.31	0.00	4.01	5.19	0.21	0.00	4.59	4.69	2.72	+0.77	--	A	--	--	4.32	5.13	4.04	0.00
2/28/2012	2.56	6.74	0.25	0.00	2.81	6.39	4.89	+1.03 B	4.41	4.87	6.54	+5.49	--	A	--	--		A	--	--
3/26/2012	2.10	7.20	3.80	0.00	2.36	6.84	5.47	+0.30	3.22	6.06	6.56	+1.05	--	A	--	--	4.07	5.38	7.89	+3.78
4/18/2012	3.76	5.54	0.63	0.00	3.92	5.28	1.64	+0.86		A	--	--	--	A	--	--	5.69	3.76	6.85	+7.82
5/15/2012	0.48	8.82	3.56	0.00	3.28	5.92	5.24	+0.36	2.32	6.96	7.13	+4.46	--	A	--	--	3.21	6.24	1.50	+0.85
6/27/2012	5.64	3.66	3.16	0.00	5.78	3.42	3.94	+10.46	5.42	3.86	6.59	+4.25	--	A	--	--	6.53	2.92	7.11	+2.50
7/25/2012	4.76	4.54	2.07	0.00	4.85	4.35	7.52	+34.60	5.62	3.66	2.81	0.00	--	A	--	--	3.58	5.87	8.60	+12.40
8/20/2012	3.71	5.59	1.34	0.00	3.55	5.65	2.39	+0.51	6.74	2.54	5.62	+2.48	--	A	--	--	6.87	2.58	5.35	+0.38
9/24/2012	4.17	5.13	6.41	0.00	4.80	4.40	7.86	+3.11	3.27	6.01	7.17	+12.83	--	A	--	--	2.87	6.58	6.76	+4.51
10/15/2012	3.54	5.76	5.69	0.00	4.49	4.71	7.68	0.00	4.84	4.44	7.24	+8.24	--	A	--	--	4.75	4.70	6.05	+2.78
11/12/2012	2.70	6.60	3.95	0.00	2.69	6.51	2.92	0.00	2.97	6.31	7.31	+7.35	--	A	--	--	2.67	6.78	2.55	0.00
12/20/2012	2.55	6.75	3.95	0.00	2.42	6.78	2.20	0.00	2.70	6.58	7.40	+6.25	--	A	--	--	2.53	6.92	6.42	+0.22
1/11/2013	2.72	6.58	5.12	0.00	2.87	6.33	6.14	+0.36	2.62	6.66	7.25	+3.18	--	A	--	--	3.00	6.45	3.99	0.00
2/25/2013	1.83	7.47	3.32	0.00	1.84	7.36	7.45	+0.18	1.93	7.35	7.68	+4.07	--	A	--	--	1.81	7.64	6.43	+0.66
3/21/2013	1.75	7.55	7.10	0.00	1.70	7.50	5.07	0.00	1.93	7.35	7.22	+8.69	--	A	--	--	1.70	7.75	1.52	+0.15
4/25/2013	4.65	4.65	6.36	0.00	4.81	4.39	7.97	+0.54	--	A	--	--	--	A	--	--	4.24	5.21	1.07	+0.22
5/13/2013	4.36	4.94	6.40	0.00	4.84	4.36	8.42	+0.72	--	A	--	--	--	A	--	--	5.77	3.68	0.27	+0.84
12/16/2013	3.86	5.44	3.97	0.00	4.45	4.75	7.24	0.00	2.53	6.75	6.75	+7.0 B	--	A	--	--	3.12	6.33	0.24	0.00
1/28/2014	1.22	8.08	5.42	0.00	1.26	7.94	4.95	0.00	--	A	--	--	--	A	--	--	2.16	7.29	0.96	0.00
2/20/2014	2.79	6.51	4.12	0.00	2.54	6.66	3.95	0.00	--	A	--	--	--	A	--	--	4.10	5.35	0.69	0.00
3/27/2014	2.88	6.42	6.08	0.00	4.66	4.54	7.97	0.00	0.83	8.45	6.30	+2.41 B	--	A	--	--	2.27	7.18	2.32	0.00
4/22/2014	4.41	4.89	7.84	0.00	6.17	3.03	9.22	+2.06	--	A	--	--	--	A	--	--	--	--	--	--
5/30/2014	3.23	6.07	7.34	0.00	--	A	--	--	--	A	--	--	--	A	--	--	2.73	6.72	0.51	0.00
7/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/19/2014	3.73	5.57	4.18	0.00	3.45	5.75	5.19	+65.6	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2014	3.95	5.35	3.42	0.00	4.03	5.17	3.42	0.00	--	--	--	--	--	--	--	--	--	--	--	--
10/22/2014	2.92	6.38	0.97	0.00	--	A	1.37	+12.06	2.96	6.32	4.21	+3.07	--	A	--	--	--	--	--	--
11/26/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/19/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/25/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/17/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/21/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/20/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/31/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/24/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0023-025.0				MW0024-035.0				MW0025-025.0				MW0026-035.0				MW0032-035.0			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	27.5 ft.bls				37.5 ft.bls				27.5 ft.bls				37.5 ft.bls				37.5 ft.bls			
SCREEN INTERVAL	22.5 - 27.5 ft.bls				32.5 - 37.5 ft.bls				22.5 - 27.5 ft.bls				32.5 - 37.5 ft.bls				32.5 - 37.5 ft.bls			
TOC ELEVATION	8.83				8.80				10.70				10.71				10.82			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	2.28	6.55	0.81	NM	2.28	6.52	2.24	NM	5.24	5.46	2.44	NM	5.24	5.47	4.04	NM	2.41	8.41	3.73	NM
1/13/2012	--	NM	NM	NM	--	NM	NM	NM	3.10	7.60	NM	0.00	3.60	7.11	NM	+0.52	3.17	7.65	NM	0.00
1/18/2012	5.75	3.08	1.75	0.00	5.41	3.39	0.12	0.00	4.48	6.22	2.17	0.00	4.81	5.90	3.65	0.00	4.90	5.92	2.72	0.00
1/26/2012	3.73	5.10	1.49	0.00	3.50	5.30	0.47	+0.25	3.33	7.37	2.44	0.00	3.33	7.38	3.57	0.00	2.85	7.97	0.51	0.00
2/28/2012	5.01	3.82	2.51	0.00	--	A	--	--	5.17	5.53	3.97	+0.40	5.16	5.55	4.03	0.00	2.98	7.84	0.48	0.00
3/26/2012	1.47	7.36	3.86	0.00	--	A	--	--	4.48	6.22	4.07	0.00	4.54	6.17	4.25	0.00	2.43	8.39	1.01	0.00
4/18/2012	3.25	5.58	3.32	+0.64	-0.55	9.35	4.83	+>20	2.89	7.81	3.07	0.00	2.91	7.80	2.86	+2.43	4.09	6.73	0.23	0.00
5/15/2012	1.48	7.35	5.54	0.00	--	A	--	--	2.56	8.14	3.62	+0.72	2.69	8.02	3.31	2.09	1.89	8.93	1.14	+0.73 B
6/27/2012	6.41	2.42	3.86	+0.57	6.21	2.59	2.84	0.00	5.41	5.29	3.25	0.00	5.27	5.44	4.11	0.00	5.80	5.02	2.94	0.00
7/25/2012	4.24	4.59	2.14	0.00	6.74	2.06	7.51	+>20	4.61	6.09	1.90	0.00	4.95	5.76	2.90	0.00	--	A	--	--
8/20/2012	3.25	5.58	2.23	0.00	--	A	--	--	3.36	7.34	1.14	0.00	3.16	7.55	2.87	0.00	4.57	6.25	0.65	+>20 B
9/24/2012	3.54	5.29	3.63	0.00	--	A	--	--	4.26	6.44	3.35	+0.30	4.14	6.57	3.14	+0.35	--	A	--	--
10/15/2012		A	--	--	3.00	5.80	3.58	0.00	3.05	7.65	3.51	0.00	3.16	7.55	3.95	0.00	2.22	8.60	4.06	0.00
11/12/2012	2.65	6.18	3.90	0.00	--	A	--	--	2.62	8.08	3.90	0.00	2.71	8.00	3.81	0.00	--	A	--	--
12/20/2012	2.48	6.35	3.06	+0.10	--	A	--	--	2.41	8.29	4.06	0.00	2.40	8.31	3.12	0.00	--	A	--	--
1/11/2013	2.58	6.25	3.79	0.00	--	A	--	--	2.23	8.47	4.30	0.00	2.01	8.70	3.67	0.00	--	A	--	--
2/25/2013	1.93	6.90	4.49	0.00	--	A	--	--	1.74	8.96	5.20	+0.10	1.72	8.99	4.64	+0.84	--	A	--	--
3/21/2013	1.73	7.10	3.86	0.00	--	A	--	--	1.62	9.08	4.50	0.00	1.63	9.08	4.06	0.00	--	A	--	--
4/25/2013	3.88	4.95	2.95	0.00	--	A	--	--	3.05	7.65	3.93	0.00	2.08	8.63	2.94	+11.8	--	A	--	--
5/13/2013	4.05	4.78	3.53	0.00	--	A	--	--	3.71	6.99	3.31	0.00	3.51	7.20	3.45	+2.45	--	A	--	--
12/16/2013	3.23	5.60	3.72	0.00	--	A	--	--	3.09	7.61	3.01	0.00	4.02	6.69	3.97	0.00	--	A	--	--
1/28/2014	2.14	6.69	3.48	0.00	--	A	--	--	2.12	8.58	4.21	0.00	2.64	8.07	4.52	0.00	--	A	--	--
2/20/2014	2.80	6.03	2.02	0.00	--	A	--	--	2.52	8.18	3.56	0.00	3.53	7.18	4.19	0.00	5.04	5.78	3.68	+5.8 B
3/27/2014	2.33	6.50	3.68	+0.12	--	A	--	--	2.46	8.24	1.88	0.00	2.45	8.26	5.44	+0.33	--	A	--	--
4/22/2014	6.51	2.32	4.12	0.00	--	A	--	--	--	--	--	--	--	--	--	--	--	A	--	--
5/30/2014	2.64	6.19	2.28	0.00	--	A	--	--	2.33	8.37	1.90	0.89	1.70	9.01	4.58	5.56	--	A	--	--
7/29/2014	--	A	--	--	3.68	5.12	--	+>75	--	--	--	--	--	--	--	--	--	A	--	--
8/19/2014	4.12	4.71	2.05	0.90	4.22	4.58	6.27	+0.5	3.42	7.28	3.80	0.00	3.21	7.50	7.19	0.50	--	A	--	--
9/16/2014	4.88	3.95	2.26	0.10	--	A	--	--	4.38	6.32	0.97	0.00	4.17	6.54	2.01	0.14	4.62	6.20	5.58	+8.23
10/22/2014	2.89	5.94	1.06	1.29	2.85	5.95	2.46	+1.18	2.79	7.91	3.27	0.18	2.75	7.96	4.35	1.69	--	A	--	--
11/26/2014	5.00	3.83	0.82	+2.6	6.70	2.10	8.08	+14.7	5.48	5.22	3.11	+0.7	5.21	5.50	2.27	0.00	--	A	--	--
12/29/2015	3.17	5.66	0.01	+0.4	2.41	6.39	2.27	+7.64	2.82	7.88	4.05	+0.11	2.94	7.77	2.86	+0.49	--	A	--	--
1/19/2015	2.88	5.95	1.78	0.00	2.80	6.00	3.06	+8.84	3.05	7.65	4.36	0.00	3.06	7.65	4.44	0.00	--	A	--	--
2/25/2015	3.66	5.17	3.57	0.00	3.61	5.19	2.57	0.00	3.27	7.43	4.30	0.00	3.10	7.61	4.09	0.00	--	A	--	--
3/17/2015	2.91	5.92	3.12	0.00	2.77	6.03	1.08	0.00	2.62	8.08	4.33	0.00	2.43	8.28	3.40	0.00	7.68	3.14	4.44	
4/21/2015	2.40	6.43	2.09	0.00	2.34	6.46	3.67	0.00	2.45	8.25	2.27	0.00	2.08	8.63	1.97	0.00	--	A	--	--
5/20/2015	2.43	6.40	1.50	+1.3	2.47	6.33	0.43	0.00	1.57	9.13	2.58	0.00	1.58	9.13	1.96	0.00	-0.18	11.00	3.24	+6.5
6/15/2015	2.57	6.26	0.92	0.00	2.53	6.27	3.03	0.00	2.15	8.55	1.58	0.00	2.21	8.50	1.26	0.00	1.72	9.10	5.26	13.30
7/31/2015	4.28	4.55	0.26	0.51	4.20	4.60	0.12	0.00	--	--	--	--	--	--	--	--	3.60	7.22	1.78	3.28
8/24/2015	3.08	5.75	0.68	0.00	3.07	5.73	1.48	0.00	2.40	8.30	0.85	0.00	2.66	8.05	0.37	0.00	5.22	5.60	7.73	>20

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0033-025.0				MW0035-025.0				MW0036-035.0				MW0037-010.0				MW0038-025.0			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	27.5 ft.bls				27.50				37.50				15.00				27.5 ft.bls			
SCREEN INTERVAL	22.5 - 27.5 ft.bls				22.5 - 27.5 ft.bls				32.5 - 37.5 ft.bls				5.0 - 15.0 ft.bls				22.5 - 27.5 ft.bls			
TOC ELEVATION	10.67				6.85				6.40				9.47				8.95			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	2.13	8.54	3.79	NM	--	--	--	--	--	--	--	--	--	--	--	--	2.41	6.54	1.89	NM
1/13/2012	3.29	7.38	NM	0.00	--	--	--	--	--	--	--	--	--	--	--	--	5.59	3.36	NM	0.00
1/18/2012	5.14	5.53	5.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--	5.96	2.99	3.05	0.00
1/26/2012	2.82	7.85	5.12	0.00	--	--	--	--	--	--	--	--	--	--	--	--	4.40	4.55	3.22	0.00
2/28/2012	2.90	7.77	4.38	0.00	--	--	--	--	--	--	--	--	--	--	--	--	5.72	3.23	0.21	0.00
3/26/2012	1.72	8.95	4.65	0.00	--	--	--	--	--	--	--	--	--	--	--	--	3.81	5.14	0.18	0.00
4/18/2012	3.60	7.07	2.04	0.00	--	--	--	--	--	--	--	--	--	--	--	--	6.67	2.28	0.09	+5.29
5/15/2012	0.69	9.98	0.78	0.00	--	--	--	--	--	--	--	--	--	--	--	--	3.41	5.54	0.72	0.00
6/27/2012	3.87	6.80	3.56	0.00	--	--	--	--	--	--	--	--	--	--	--	--	5.87	3.08	1.03	0.00
7/25/2012	2.85	7.82	2.96	0.00	--	--	--	--	--	--	--	--	--	--	--	--	3.74	5.21	0.47	+0.50
8/20/2012	3.69	6.98	0.71	0.00	--	--	--	--	--	--	--	--	--	--	--	--	7.81	1.14	0.88	0.00
9/24/2012	2.66	8.01	5.77	0.00	--	--	--	--	--	--	--	--	--	--	--	--	3.20	5.75	1.03	0.00
10/15/2012	2.66	8.01	3.13	0.00	--	--	--	--	--	--	--	--	--	--	--	--	4.78	4.17	0.96	0.00
11/12/2012	2.39	8.28	3.82	0.00	--	--	--	--	--	--	--	--	--	--	--	--	2.63	6.32	2.78	0.00
12/20/2012	2.35	8.32	7.22	+0.17	--	--	--	--	--	--	--	--	--	--	--	--	2.52	6.43	1.90	0.00
1/11/2013	2.16	8.51	4.14	0.00	--	--	--	--	--	--	--	--	--	--	--	--	--	NM	NM	NM
2/25/2013	1.60	9.07	8.48	+2.22	--	--	--	--	--	--	--	--	--	--	--	--	1.80	7.15	3.03	0.00
3/21/2013	2.32	8.35	8.14	+2.43 B	--	--	--	--	--	--	--	--	--	--	--	--	1.78	7.17	1.59	0.00
4/25/2013	2.42	8.25	5.05	0.00	--	--	--	--	--	--	--	--	--	--	--	--	5.53	3.42	1.00	0.00
5/13/2013	4.27	6.40	5.47	0.00	--	--	--	--	--	--	--	--	--	--	--	--	7.69	1.26	1.68	0.00
12/16/2013	2.31	8.36	4.29	+1.1	1.66	5.19	3.52	0.00	1.44	4.96	4.80	0.00	2.78	6.69	4.03	0.00	3.38	5.57	0.68	0.00
1/28/2014	1.48	9.19	5.94	0.00	1.31	5.54	4.59	0.00	0.98	5.42	5.88	0.00	2.56	6.91	5.23	0.00	2.77	6.18	3.26	0.00
2/20/2014	2.99	7.68	1.49	0.00	2.40	4.45	4.48	0.00	--	A	--	--	3.88	5.59	4.88	+0.70	3.32	5.63	1.99	0.00
3/27/2014	3.31	7.36	5.89	0.00	2.10	4.75	1.70	0.00	--	A	--	--	2.97	6.50	3.95	0.00	2.45	6.50	3.13	0.00
4/22/2014	3.14	7.53	6.86	0.13	2.63	4.22	2.08	+0.51	--	A	--	--	--	--	--	--	3.65	5.30	2.82	0.00
5/30/2014	2.50	8.17	2.10	+1.18	1.47	5.38	0.38	+0.26	--	A	--	--	--	--	--	--	4.37	4.58	2.55	0.00
7/29/2014	4.77	5.90	--	0.00	1.35	5.50	--	+1.7	--	A	--	--	--	--	--	--	--	--	--	--
8/19/2014	2.76	7.91	5.52	+9.6	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2014	2.61	8.06	1.91	+4.39		3.88	0.17	0.00	--	A	--	--	--	--	--	--	--	--	--	--
10/22/2014	2.86	7.81	0.70	+8.93	4.24	2.61	0.25	+2.9	4.29	2.11	0.44	+15.69	3.55	5.92	0.38	0.00	--	--	--	--
11/26/2014	4.15	6.52	4.50	+2.2	4.24	2.61	2.98	+1.8	--	A	--	--	4.78	4.69	1.79	0.00	--	--	--	--
12/29/2014	3.05	7.62	0.01	0.26	3.14	3.71	1.40	+0.18	3.01	3.39	1.33	0.00	3.57	5.90	0.00	0.00	--	--	--	--
1/19/2015	3.11	7.56	0.44	0.00	3.14	3.71	4.28	+0.12	2.86	3.54	1.33	0.00	3.56	5.91	0.78	0.00	--	--	--	--
2/25/2015	4.84	5.83	4.35	+0.19	3.97	2.88	4.82	0.00	3.36	3.04	1.70	+0.13	3.59	5.88	0.54	0.00	--	--	--	--
3/17/2015	3.41	7.26	1.21	+0.61	2.55	4.30	2.75	0.00	3.01	3.39	0.75	0.00	3.42	6.05	0.18	0.00	--	--	--	--
4/21/2015	3.57	7.10	7.37	+1.03	2.39	4.46	1.13	0.00	2.25	4.15	0.58	0.00	3.12	6.35	0.16	0.00	--	--	--	--
5/20/2015	1.98	8.69	1.09	0.00	1.24	5.61	0.45	0.00	1.37	5.03	0.31	0.00	2.56	6.91	0.29	0.00	--	--	--	--
6/15/2015	2.77	7.90	3.54	0.00	1.85	5.00	0.15	0.00	2.10	4.30	0.10	0.00	2.65	6.82	0.06	0.00	--	--	--	--
7/31/2015	3.85	6.82	0.54	0.00	2.69	4.16	0.19	0.00	2.65	3.75	0.19	0.10	--	--	--	--	--	--	--	--
8/24/2015	2.68	7.99	0.74	0.00	1.62	5.23	2.60	0.00	2.25	4.15	0.10	0.00	3.22	6.25	0.12	0.00	--	--	--	--

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0039-032.5				MW0040-025.0				MW0041-025.0				MW0042-035.0				MW0044-027.5			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	35.00				27.50				27.50				37.50				35.00			
SCREEN INTERVAL	30.0 - 35.0 ft.bls				22.5 - 27.5 ft.bls				22.5 - 27.5 ft.bls				32.5 - 37.5 ft.bls				20.0 - 35.0 ft.bls			
TOC ELEVATION	8.49				8.86				9.10				9.14				8.21			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/13/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/18/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/26/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/28/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/26/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/18/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/15/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
6/27/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
7/25/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
8/20/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/24/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/15/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
11/12/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/20/2012	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
1/11/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
2/25/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
3/21/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4/25/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
5/13/2013	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/16/2013	--	A	--	--	4.81	4.05	3.33	0.00	2.14	6.96	0.86	0.00	2.14	7.00	2.80	0.00	--	A	--	--
1/28/2014	--	A	--	--	3.87	4.99	5.56	0.00	1.59	7.51	1.06	0.00	1.64	7.50	3.38	0.00	--	A	--	--
2/20/2014	3.37	5.12	2.54	0.00	2.93	5.93	1.23	0.00	3.14	5.96	2.93	0.00	3.12	6.02	1.75	0.00	4.88	3.33	4.59	1.20
3/27/2014	--	A	--	--	5.11	3.75	7.59	+0.77 B	2.26	6.84	2.07	0.00	2.29	6.85	3.02	0.00	--	A	--	--
4/22/2014	--	A	--	--	4.52	4.34	8.77	0.00	4.38	4.72	3.83	0.00	4.32	4.82	3.64	0.00	--	A	--	--
5/30/2014	--	A	--	--	4.47	4.39	5.62	+0.23	1.38	7.72	1.40	+0.13	1.40	7.74	2.52	0.00	3.61	4.60	6.95	+10.56
7/29/2014	4.76	3.73	--	+0.6	3.43	5.43	--	0.00	--	--	--	--	--	--	--	--	3.09	5.12	--	0.00
8/19/2014	--	A	--	--	5.06	3.80	6.87	--	4.79	4.31	2.43	+5.20	4.74	4.40	5.01	+9.6	6.91	1.30	7.51	+14.00
9/16/2014	--	A	--	--	4.98	3.88	7.61	0.00	3.47	5.63	1.16	0.00	3.46	5.68	1.39	0.00	4.26	3.95	7.18	0.00
10/22/2014	3.80	4.69	4.92	0.00	3.83	5.03	1.47	+0.11	--	A	--	--	--	A	--	--	3.82	4.39	2.41	0.00
11/26/2014	6.10	2.39	6.63	0.00	5.49	3.37	1.77	0.00	4.65	4.45	3.21	0.00	4.66	4.48	1.93	+1.1	4.91	3.30	2.78	0.00
12/29/2014	4.32	4.17	4.94	+0.46	4.41	4.45	0.69	0.00	3.20	5.90	1.93	+0.26	3.25	5.89	2.32	+2.83	3.82	4.39	0.72	+0.14
1/19/2015	4.93	3.56	6.08	0.00	4.78	4.08	1.07	0.00	3.05	6.05	2.26	+0.13	3.06	6.08	2.83	0.00	4.29	3.92	6.05	3.81
2/25/2015	--	A	--	--	4.63	4.23	3.55	0.00	3.45	5.65	3.06	0.00	3.43	5.71	3.93	0.00	4.15	4.06	6.99	0.72
3/17/2015	3.74	4.75	5.85	+0.14	3.59	5.27	0.25	0.00	2.49	6.61	0.72	0.00	2.43	6.71	3.21	0.00	4.02	4.19	8.19	+1.00
4/21/2015	3.47	5.02	2.53	+0.20	3.26	5.60	0.55	0.00	2.45	6.65	1.41	+0.18	2.47	6.67	2.02	1.41	2.99	5.22	3.66	0.15
5/20/2015	2.47	6.02	5.55	+0.06	2.46	6.40	0.35	0.00	2.13	6.97	0.35	+0.7	2.12	7.02	2.16	0.00	2.11	6.10	0.31	+0.5
6/15/2015	2.51	5.98	2.72	0.15	2.45	6.41	0.10	0.00	2.35	6.75	0.11	0.53	2.35	6.79	2.32	0.00	2.89	5.32	0.76	0.00
7/31/2015	3.73	4.76	1.73	0.00	3.66	5.20	0.12	0.00	--	--	--	--	--	--	--	--	3.17	5.04	0.03	0.00
8/24/2015	3.23	5.26	1.50	0.00	3.24	5.62	0.83	0.00	2.78	6.32	0.23	0.00	2.84	6.30	2.68	0.00	2.80	5.41	0.11	0.00

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0045-034.5				MW0046-010.0				MW0047-027.5				MW0048-027.5				MW0049-027.5			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	37.0 ft.bls				15 ft.bls				35.0 ft.bls				35.0 ft.bls				35.00			
SCREEN INTERVAL	32.0 - 37.0 ft.bls				5 -15 ft.bls				20.0 - 35.0 ft.bls				20.0 - 35.0 ft.bls				20.0 - 35.0 ft.bls			
TOC ELEVATION	9.03				9.03				9.34				9.06				11.03			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	2.37	6.66	1.14	NM	2.42	6.61	0.20	NM	2.28	7.06	1.66	NM	2.29	6.77	2.66	NM	--	--	--	--
1/13/2012	5.46	3.57	NM	0.00	6.58	2.45	NM	+0.25	5.34	4.00	NM	+0.15	5.08	3.98	NM	0.00	--	--	--	--
1/18/2012	6.04	2.99	1.55	0.00	6.40	2.63	0.57	0.00	5.85	3.49	3.39	0.00	6.63	2.43	2.19	0.00	--	--	--	--
1/26/2012	4.77	4.26	1.33	0.00	6.32	2.71	0.46	+1.04	4.89	4.45	5.03	0.00	3.86	5.20	0.26	0.00	--	--	--	--
2/28/2012	5.65	3.38	1.79	0.00	7.36	1.67	7.10	+5.00	--	A	--	--	3.61	5.45	1.30	0.00	--	--	--	--
3/26/2012	3.74	5.29	2.67	0.00	--	A	--	--	--	A	--	--	1.32	7.74	0.68	0.00	--	--	--	--
4/18/2012	6.63	2.40	1.04	+3.77	7.57	1.46	0.25	+0.78	--	A	--	--	4.83	4.23	0.23	+0.54	--	--	--	--
5/15/2012	3.53	5.50	1.80	0.00	4.74	4.29	6.67	+1.40	3.54	5.80	7.06	0.00	1.34	7.72	1.57	+0.24	--	--	--	--
6/27/2012	6.17	2.86	1.68	+0.54	7.89	1.14	7.11	+2.61	--	A	--	--	6.08	2.98	0.67	0.00	--	--	--	--
7/25/2012	3.73	5.30	0.37	+0.70	--	A	--	--	--	A	--	--	5.36	3.70	1.01	0.00	--	--	--	--
8/20/2012	7.73	1.30	1.18	0.00	--	A	--	--	--	A	--	--	3.56	5.50	2.56	0.00	--	--	--	--
9/24/2012	3.29	5.74	1.90	0.00	--	A	--	--	--	A	--	--	4.37	4.69	3.03	+0.86	--	--	--	--
10/15/2012	4.85	4.18	1.10	0.00	5.91	3.12	7.59	+0.34	--	A	--	--	3.46	5.60	4.15	+2.33	--	--	--	--
11/12/2012	2.74	6.29	1.67	0.00	--	A	--	--	--	A	--	--	2.75	6.31	1.56	0.00	--	--	--	--
12/20/2012	2.53	6.50	2.30	0.00	5.31	3.72	7.99	+14.38 B	--	A	--	--	2.42	6.64	2.02	0.00	--	--	--	--
1/11/2013	--	NM	NM	NM	--	NM	NM	NM	--	A	--	--	2.82	6.24	2.26	0.00	--	--	--	--
2/25/2013	1.89	7.14	4.56	0.00	3.02	6.01	8.66	+6.74 B	--	A	--	--	1.73	7.33	3.45	+0.12	--	--	--	--
3/21/2013	1.80	7.23	2.98	0.00	3.33	5.70	8.13	+8.56 B	--	A	--	--	1.66	7.40	3.05	0.00	--	--	--	--
4/25/2013	5.70	3.33	1.06	+0.50	5.59	3.44	2.75	0.00	--	A	--	--	4.44	4.62	5.26	+0.13	--	--	--	--
5/13/2013	7.58	1.45	1.13	0.00	8.53	0.50	7.16	+1.39	--	A	--	--	4.44	4.62	7.36	+0.63	--	--	--	--
12/16/2013	3.50	5.53	1.56	0.00	5.38	3.65	7.68	+16.9	--	A	--	--	3.96	5.10	4.79	+0.6 B	1.83	9.20	2.11	0.00
1/28/2014	2.59	6.44	5.88	+0.50	3.58	5.45	5.16	+0.20	--	A	--	--	1.97	7.09	5.53	0.00	1.30	9.73	1.35	0.00
2/20/2014	2.91	6.12	1.04	0.00	2.54	6.49	3.22	+0.50	--	A	--	--	2.66	6.40	2.23	0.00	3.01	8.02	0.72	0.00
3/27/2014	3.04	5.99	1.27	0.00	3.98	5.05	7.02	+2.36	2.84	6.50	6.33	+0.18	3.13	5.93	5.89	+7.56 B	2.09	8.94	6.29	0.00
4/22/2014	3.75	5.28	1.76	0.00	4.96	4.07	2.13	0.00	--	A	--	--	4.88	4.18	5.52	+0.50	2.80	8.23	1.06	0.00
5/30/2014	4.66	4.37	1.29	+9.89	4.79	4.24	1.22	+0.26	--	A	--	--	3.52	5.54	8.17	+4.71	--	--	--	--
7/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.89	7.14	--	0.00
8/19/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
9/16/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	3.05	7.98	2.14	0.00
10/22/2014	--	--	--	--	--	--	--	--	--	--	--	--	2.94	6.12	0.56	+1.87	--	--	--	--
11/26/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.88	6.15	3.09	0.00
12/29/2014	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	NM	NM	NM	NM
1/19/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.29	6.74	1.34	0.00
2/25/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.84	6.19	1.34	0.00
3/17/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.86	8.17	1.13	0.00
4/21/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.33	8.70	1.32	0.00
5/20/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.17	9.86	0.57	0.00
6/15/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.76	9.27	0.65	0.10
7/31/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.63	8.40	0.12	0.00
8/24/2015	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	2.48	8.55	1.95	0.00

Table 4-3
Summary of Performance Monitoring Well Data
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

WELL NO.	MW0050-010.0				MW0051-025.0				MW0053-010.0				MW0054-010.0				MW0055-025.0			
DIAMETER	1 inch				1 inch				1 inch				1 inch				1 inch			
WELL DEPTH	15 ft.bls				27.5 ft.bls				15 ft.bls				15 ft.bls				27.5 ft.bls			
SCREEN INTERVAL	5 -15 ft.bls				22.5 - 27.5 ft.bls				5 -15 ft.bls				5 -15 ft.bls				22.5 - 27.5 ft.bls			
TOC ELEVATION	10.85				9.63				8.55				10.03				9.60			
DATE	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**	**ELEV**	**DTW**	**DO**	**P(+)/V(-)**
1/4/2012	2.17	8.68	0.33	NM	2.06	7.57	0.20	NM	1.99	6.56	0.21	NM	1.93	8.10	0.22	NM	1.94	7.66	1.12	NM
1/13/2012	3.40	7.45	NM	0.00	3.11	6.52	NM	0.00	--	A	--	--	2.75	7.28	2.30	NM	2.66	6.94	NM	0.00
1/18/2012	--	A	--	--	5.48	4.15	0.72	0.00	--	A	--	--	5.13	4.90	5.06	+1.65	5.35	4.25	1.60	0.00
1/26/2012	--	A	--	--	2.72	6.91	--	0.00	--	A	--	--	2.88	7.15	7.77	+0.47	2.34	7.26	1.62	0.00
2/28/2012	--	A	--	--	2.79	6.84	2.72	0.00	--	A	--	--	6.38	3.65	3.55	+5.25 B	2.49	7.11	7.89	0.00
3/26/2012	--	A	--	--	1.62	8.01	3.19	0.00	1.95	6.60	7.11	+7.54	3.17	6.86	7.26	+1.60	1.48	8.12	3.75	0.00
4/18/2012	2.54	8.31	1.81	+0.22	3.11	6.52	0.74	+0.62	1.90	6.65	5.70	+0.21	6.63	3.40	8.15	+0.88	2.44	7.16	2.32	0.00
5/15/2012	--	A	--	--	1.04	8.59	1.05	0.00	1.40	7.15	8.68	+0.55 B	2.08	7.95	8.78	+8.40 B	0.80	8.80	3.73	0.00
6/27/2012	--	A	--	--	3.72	5.91	2.25	0.00	4.65	3.90	8.67	+1.56	4.24	5.79	8.11	+4.14	3.35	6.25	3.88	0.00
7/25/2012	--	A	--	--	2.71	6.92	0.68	0.00	3.12	5.43	8.54	+5.20	3.31	6.72	8.37	+>20	2.50	7.10	1.42	0.00
8/20/2012	--	A	--	--	3.59	6.04	0.61	+0.32	4.43	4.12	7.51	+2.56	5.04	4.99	7.87	+1.16	3.28	6.32	1.76	0.00
9/24/2012	--	A	--	--	2.82	6.81	1.44	0.00	4.95	3.60	7.74	>20 B	3.31	6.72	8.40	+4.55 B	2.48	7.12	3.71	0.00
10/15/2012	--	A	--	--	0.32	9.31	2.92	0.00	7.65	0.90	7.38	+3.09	1.27	8.76	7.98	+1.32	2.82	6.78	4.01	0.00
11/12/2012	--	A	--	--	2.35	7.28	2.93	0.00	0.31	8.24	8.06	+8.44	2.28	7.75	4.48	+5.77	2.08	7.52	3.85	0.00
12/20/2012	--	A	--	--	2.36	7.27	3.18	0.00	3.05	5.50	8.24	+0.55 B	2.48	7.55	8.22	+9.28 B	2.26	7.34	2.26	0.00
1/11/2013	--	A	--	--	1.92	7.71	3.18	0.00	5.41	3.14	8.02	+1.83 B	3.25	6.78	6.02	+0.20	2.49	7.11	3.64	0.00
2/25/2013	--	A	--	--	1.59	8.04	4.45	+0.50	-0.21	8.76	8.50	+8.48 B	2.08	7.95	8.68	+0.36	1.57	8.03	4.86	+0.13
3/21/2013	6.55	4.30	7.25	+8.38	1.53	8.10	4.00	0.00	--	A	--	--	1.91	8.12	8.47	+0.77	1.43	8.17	4.48	0.00
4/25/2013	--	A	--	--	4.98	4.65	3.95	0.00	--	A	--	--	5.79	4.24	8.31	+2.3 B	4.27	5.33	4.81	0.00
5/13/2013	--	A	--	--	2.96	6.67	3.43	0.00	--	A	--	--	5.73	4.30	7.53	+2.51 B	3.47	6.13	4.43	0.00
12/16/2013	--	A	--	--	2.21	7.42	4.15	0.00	3.28	5.27	7.30	+12.3	3.43	6.60	7.73	+5.10	2.09	7.51	3.81	+0.60
1/28/2014	1.76	9.09	5.32	0.00	1.74	7.89	5.04	0.00	5.11	3.44	7.83	+>20 B	5.13	4.90	7.92	+>20 B	4.40	5.20	NM	0.00
2/20/2014	2.70	8.15	4.37	+4.50	2.33	7.30	5.35	0.00	6.00	2.55	8.85	+32 B	7.73	2.30	8.72	+28.5 B	3.07	6.53	3.80	0.00
3/27/2014	2.67	8.18	3.81	+0.10	2.74	6.89	3.18	0.00	5.60	2.95	8.12	+>20 B	3.11	6.92	7.88	+2.20 B	2.06	7.54	3.16	0.00
4/22/2014	--	--	--	--	2.91	6.72	--	+0.33	5.62	2.93	9.27	+3.85	3.07	6.96	9.27	+4.62	2.37	7.23	5.20	0.00
5/30/2014	3.04	7.81	3.73	+2.58	1.75	7.88	3.20	+2.25	2.60	5.95	8.55	+0.28	3.72	6.31	9.21	+9.75	2.39	7.21	2.80	0.00
7/29/2014	--	--	--	--	3.60	6.03	--	0.00	--	A	--	--	7.55	2.48	--	+1.50	4.06	5.54	--	0.00
8/19/2014	--	A	--	--	3.95	5.68	3.48	1.00	4.19	4.36	8.88	+1.3	--	A	--	--	3.70	5.90	3.10	0.00
9/16/2014	4.35	6.50	7.68	+0.13	3.38	6.25	2.12	0.00	3.60	4.95	7.69	+0.33	9.53	0.50	7.41	+1.54	4.16	5.44	2.95	0.00
10/22/2014	2.74	8.11	7.40	+4.89	2.73	6.90	3.07	0.00	2.63	5.92	5.36	+1.57	2.60	7.43	7.96	0.00	2.55	7.05	3.39	0.00
11/26/2014	5.13	5.72	7.07	+2.50	4.28	5.35	3.51	+1.90	6.19	2.36	7.41	+13.6	8.23	1.80	8.90	+0.70	5.29	4.31	5.22	0.00
12/29/2014	2.46	8.39	6.41	+0.14	3.30	6.33	3.22	+0.33	4.20	4.35	7.65	>20 B	4.10	5.93	7.76	4.06	3.27	6.33	4.38	0.00
1/19/2015	4.87	5.98	7.98	9.18	3.30	6.33	4.96	0.00	8.30	0.25	8.56	+3.97	6.72	3.31	8.63	>20 B	3.00	6.60	5.36	0.00
2/25/2015	2.90	7.95	6.37	+0.21 B	4.23	5.40	5.02	+0.16	--	A	--	--	--	A	--	--	3.36	6.24	4.75	0.00
3/17/2015	2.59	8.26	7.40	0.00	3.17	6.46	3.73	0.00	4.04	4.51	9.14	+2.83	4.99	5.04	9.17	+0.74	2.24	7.36	4.52	0.00
4/21/2015	2.32	8.53	3.15	+0.24	3.08	6.55	2.50	0.00	--	A	--	--	7.68	2.35	7.55	>+20	3.58	6.02	2.78	0.00
5/20/2015	1.51	9.34	0.55	0.00	2.00	7.63	2.11	0.00	3.30	5.25	7.32	>+20	2.12	7.91	9.08	>+0.6	6.78	2.82	9.08	0.00
6/15/2015	2.09	8.76	2.35	0.00	2.51	7.12	1.02	0.00	6.00	2.55	8.42	>+20	2.35	7.68	9.08	2.84	2.36	7.24	3.09	0.00
7/31/2015	--	--	--	--	3.33	6.30	0.12	0.00	3.16	5.39	4.84	B	2.75	7.28	7.63	1.28B	2.80	6.80	4.26	0.00
8/24/2015	2.25	8.60	0.05	0.00	2.45	7.18	0.11	0.00	3.65	4.90	8.28	0.66	2.43	7.60	7.85	0.85	2.50	7.10	2.07	0.00

Notes:
A = artesian
B = indicates groundwater bubbling in well
APMR = Annual Performance Monitoring Report
DO = dissolved oxygen concentration in milligrams per liter
DTW = depth to water
ELEV = elevation
ft.bls = feet below land surface
NM = Not Measured
P(+)/V(-) = Pressure(+)/Vacuum(-)
TOC = top of casing

Table 4-4
Summary of Dissolved Oxygen and Pressure Changes
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Zone	Monitoring Well	Distance from IAS Well	Observed DO	Maximum Change in Pressure
Shallow Zone (5-20 feet bls)	MW0007-009.0	30		0
	MW0037-010.0	35		0
	MW0050-010.0	40		9.18
	MW0054-010.0	15		>20
Intermediate-Shallow Zone (20-30 feet bls)	MW0010-025.0	30		3.27
	MW0013IS-025.0	5		0.13
	MW0015-025.0	30		1.02
	MW0023-025.0	15		2.6
	MW0025-025.0	30		0.7
	MW0033-025.0	10		9.6
	MW0035-025.0	20		15.69
	MW0040-025.0	20		0.11
	MW0041-0025.0	5		5.2
	MW0044-027.5	15		14
	MW0049-027.5	15		0
	MW0051-027.5	10		1.9
	MW0055-025.0	5		0
Intermediate Zone (30-40 feet bls)	MW0007-030.0	30		4
	MW0016-036.0	30		0.88
	MW0024-035.0	15		14.7
	MW0026-035.0	30		1.69
	MW0032-035.0	10		13.3
	MW0036-035.0	20		15.69
	MW0039-032.5	20		0.6
	MW0042-035.0	5		9.6

Notes:

A = artesian
DO = dissolved oxygen
IAS = in situ air sparging
OL = off line

>5 mg/L
>2 mg/L to 5 mg/L
>1 mg/L to 2 mg/L

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0001-020.0		M505-MW0002-009.0		M505-MW0003-009.0			M505-MW0003-030.0			
	Alias/S.I.	IW-1S (15-25)		IW-2S (4-14)		IW-3S (4-14)			IW-3I (25-35)			
	Date	5/25/10	11/10/10	11/14/02	11/20/03	5/28/03	11/19/03	05/28/14	5/26/10	11/9/10	5/2/11	5/19/15
	KSC RIS Sample ID	M505-MW0001-020.0-20100525	M505-MW0001-020.0-20101110	M505-MW0002-014.0-20021114	M505-MW0002-014.0-20031120	M505-MW0003-014.0-20030528	M505-MW0003-014.0-20031119	M505-MW0003-014.0-20031119	M505-MW0003-030.0-20100526	M505-MW0003-030.0-20101109	M505-MW0003-030.0-20110502	M505-MW0003-030.0-20150519
Volatile Organics (µg/l)	**GCTL***											
1,1-Dichloroethane	70	<0.64	<0.130	<1.0	<1.0	<1.0	<1.0	<0.30	<0.64	<0.130	<0.300	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<1.0	<1.0	<1.0	<1.0	<0.16	<0.59	<0.160	<0.160	<0.16
Benzene	1	<0.42	<0.210	<1.0	<1.0	<1.0	<1.0	<0.21	<0.42	<0.210	<0.210	<0.21
cis-1,2-Dichloroethene	70	<0.48	<0.360	<1.0	<1.0	<1.0	<1.0	<0.36	<0.48	<0.360	<0.360	<0.36
Ethylbenzene	30	<0.43	<0.210	<1.0	<1.0	<1.0	<1.0	<0.21	<0.43	<0.210	<0.210	<0.21
Tetrachloroethene	3	<0.43	<0.110	<1.0	<1.0	<1.0	<1.0	<0.22	<0.43	<0.110	<0.220	<0.22
Toluene	40	<0.41	<0.190	<1.0	<1.0	<1.0	<1.0	<0.19	<0.41	<0.190	<0.190	<0.19
trans-1,2-Dichloroethene	100	<0.45	<0.120	<1.0	<1.0	<1.0	<1.0	<0.19	<0.45	<0.120	<0.120	<0.19
Trichloroethene	3	<0.63	<0.160	<1.0	<1.0	<1.0	<1.0	<0.36	<0.63	<0.160	<0.360	<0.36
Vinyl Chloride	1	<0.52	<0.220	<1.0	<1.0	<1.0	<1.0	<0.36	<0.52	<0.220	<0.360	<0.36
Xylenes (Total)	20	<0.85	<0.410	<1.0	<1.0	<1.0	<1.0	<0.31	<0.85	<0.410	<0.310	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0004-009.0						M505-MW0005S-009.0		M505-MW0005I-030.0						M505-MW0006S-009.0	
	Alias/S.I.	IW-4S (4-14)						IW-5S (4-14)		IW-5I (25-35)						IW-6S (4-14)	
	Date	5/26/10	11/10/10	5/4/11	1/7/13	05/29/14	05/19/15	11/29/05	12/17/09	5/25/10	11/9/10	5/4/11	1/7/13	05/29/14	05/20/15	11/12/02	11/20/03
	KSC RIS Sample ID	M505-MW0004-009.0-20100526	M505-MW0004-009.0-20101110	M505-MW0004-009.0-20110504	M505-MW0004-009.0-20130107	M505-MW0004-009.0-20140529	M505-MW0004-009.0-20150519	M505-MW0005-014.0-20051129	M505-MW0005-009.0-20091217	M505-MW0005-030.0-20100525	M505-MW0005-030.0-20101109	M505-MW0005-030.0-20110504	M505-MW0005-030.0-20130107	M505-MW0005-030.0-20140529	M505-MW0005-030.0-20150520	M505-MW0006-014.0-20021112	M505-MW0006-014.0-20031120
Volatile Organics (µg/l)	**GCTL***																
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.26	<0.56	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<1.0	<1.0
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.4	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<1.0	<1.0
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.23	<0.52	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<1.0	<1.0
cis-1,2-Dichloroethene	70	<0.48	<0.360	<0.360	<0.36	<0.36	<0.36	<0.17	1.9	<0.48	<0.360	1.03	**86**	12	2.0	1.9	<1.0
Ethylbenzene	30	<0.43	<0.210	<0.210	0.24 I	<0.21	<0.21	<0.2	<0.10	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<1.0	<1.0
Tetrachloroethene	3	<0.43	<0.110	0.250 I	<0.22	<0.22	<0.22	<0.17	<0.22	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22	<1.0	<1.0
Toluene	40	<0.41	<0.190	0.420 I	<0.19	<0.19	<0.19	<0.35	<0.52	<0.41	<0.190	0.210 I	<0.19	<0.19	<0.19	<1.0	<1.0
trans-1,2-Dichloroethene	100	<0.45	<0.120	<0.120	<0.19	<0.19	<0.19	<0.17	<0.13	<0.45	<0.120	<0.120	<0.19	0.79 I	0.40 I	<1.0	<1.0
Trichloroethene	3	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.27	<0.15	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<1.0	<1.0
Vinyl Chloride	1	<0.52	<0.220	<0.360	<0.36	<0.36	<0.36	<0.43	<0.25	<0.52	<0.220	<0.360	0.70 I	<0.36	<0.36	<1.0	<1.0
Xylenes (Total)	20	2.4	<0.410	0.670 I	2.3	<0.31	<0.31	<0.32	0.47 I	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<1.0	<1.0

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0006I-030.0			M505-MW0007S-009.0		M505-MW0007I-030.0							M505-MW0007D-047.5		
	Alias/S.I.	IW-6I (25-35)			IW-7S (4-14)		IW-7I (25-35)							IW-7D (45-50)		
	Date	5/25/10	11/10/10	5/3/11	11/18/03	12/17/09	8/4/97	9/22/98	5/25/10	11/9/10	5/2/11	05/29/14	05/19/15	5/25/10	11/9/10	5/2/11
	KSC RIS Sample ID	M505-MW0006-030.0-20100525	M505-MW0006-030.0-20101110	M505-MW0006-030.0-20110503	M505-MW0007-014.0-20031118	M505-MW0007-009.0-20091217	M505-MW0007-035.0-19970804	M505-MW0007-035.0-19980922	M505-MW0007-030.0-20100525	M505-MW0007-030.0-20101109	M505-MW0007-030.0-20110502	M505-MW0007-030.0-20140529	M505-MW0007-030.0-20150519	M505-MW0007-047.5-20100525	M505-MW0007-047.5-20101109	M505-MW0007-047.5-20110502
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<1.0	<0.56	<5.0	<25	<0.64	<0.130	<0.300	<0.30	<0.30	<0.64	<0.130	<0.300
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<1.0	<0.16	<5.0	<25	<0.59	<0.160	<0.160	<0.16	<0.16	<0.59	<0.160	<0.160
Benzene	1	<0.42	<0.210	<0.210	<1.0	<0.52	<1.0	<25	<0.42	<0.210	<0.210	<0.21	<0.21	<0.42	<0.210	<0.210
cis-1,2-Dichloroethene	70	<0.48	<0.360	0.550 I	<1.0	7.7	**96**	**420**	12	32.3	6.94	5.20	4.1	36	37.2	45.1
Ethylbenzene	30	<0.43	<0.210	<0.210	<1.0	<0.10	<5.0	<25	<0.43	<0.21	<0.21	<0.21	<0.21	<0.43	<0.210	<0.210
Tetrachloroethene	3	<0.43	<0.110	0.300 I	<1.0	<0.22	<3.0	<25	<0.43	<0.11	<0.22	<0.22	<0.22	<0.43	<0.110	<0.220
Toluene	40	<0.41	<0.190	0.510 I	<1.0	<0.52	5.0	<25	<0.41	<0.19	0.420 I	<0.19	<0.19	<0.41	<0.190	<0.190
trans-1,2-Dichloroethene	100	<0.45	<0.120	<0.120	<1.0	0.57 I	7.6	15 J	1.0	1.19	<0.12	0.67 I	0.81 I	0.62	<0.120	0.520 I
Trichloroethene	3	<0.63	<0.160	<0.360	<1.0	<0.15	**3.6**	<25	<0.63	1.32	1.88	<0.36	<0.36	<0.63	<0.160	<0.360
Vinyl Chloride	1	<0.52	<0.220	<0.360	<1.0	<0.25	<1.0	<25	<0.52	<0.22	<0.36	<0.36	<0.36	<0.52	<0.220	<0.360
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<1.0	<0.22	<5.0	<25	< 0.85	<0.41	<0.31	<0.31	<0.31	< 0.85	<0.410	<0.310

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0008S-009.0		M505-MW0008I-030.0		M505-MW0009S-010.0		M505-MW0009I-025.5			M505-MW0010IS-025.5					
	Alias/S.I.	IW-8S (4-14)		IW-8I (25-35)		IW-9S (5-15)		IW-9IS (23-28)			IW-10IS (23-28)					
	Date	11/14/02	11/19/03	5/25/10	11/9/10	11/30/05	12/17/09	5/25/10	11/9/10	5/2/11	5/25/10	11/9/10	5/2/11	1/7/13	05/29/14	05/19/15
	KSC RIS Sample ID	M505-MW0008-014.0-20021114	M505-MW0008-014.0-20031119	M505-MW0008-030.0-20100525	M505-MW0008-030.0-20101109	M505-MW0009-015.0-20051130	M505-MW0009-010.0-20091217	M505-MW0009-025.5-20100525	M505-MW0009-025.5-20101109	M505-MW0009-025.5-20110502	M505-MW0010-025.5-20100525	M505-MW0010-025.5-20101109	M505-MW0010-025.5-20110502	M505-MW0010-025.5-20130107	M505-MW0010-025.5-20140529	M505-MW0010-025.5-20150519
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<1.0	<1.0	<0.64	<0.130	<0.26	< 0.56	<0.64	<0.130	<0.300	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<1.0	<1.0	<0.59	<0.160	<0.40	< 0.16	<0.59	<0.160	<0.160	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16
Benzene	1	<1.0	<1.0	<0.42	<0.210	<0.23	< 0.52	<0.42	<0.210	<0.210	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	<1.0	<1.0	<0.48	<0.360	<0.17	<0.12	0.68 I	<0.360	0.830 I	2.6	1.20	67.0	4.0	1.0	<0.36
Ethylbenzene	30	<1.0	<1.0	<0.43	<0.210	<0.20	< 0.10	<0.43	<0.210	<0.210	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21
Tetrachloroethene	3	<1.0	<1.0	<0.43	<0.110	<0.17	< 0.22	<0.43	<0.110	<0.220	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22
Toluene	40	<1.0	<1.0	<0.41	<0.190	<0.35	< 0.52	<0.41	<0.190	<0.190	<0.41	<0.190	<0.190	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	<1.0	<1.0	<0.45	<0.120	<0.17	< 0.13	<0.45	<0.120	<0.190	<0.45	<0.120	3.41	0.52 I	0.24 I	0.24 I
Trichloroethene	3	<1.0	<1.0	<0.63	<0.160	<0.27	< 0.15	<0.63	<0.160	<0.360	<0.63	<0.160	**16.8**	1.6	<0.36	<0.36
Vinyl Chloride	1	<1.0	<1.0	<0.52	<0.220	<0.43	< 0.25	<0.52	<0.220	<0.360	<0.52	<0.220	<0.360	<0.36	<0.36	<0.36
Xylenes (Total)	20	<1.0	<1.0	< 0.85	<0.410	<0.32	< 0.22	< 0.85	<0.410	<0.310	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0011-010.0		M505-MW0012-025.5			M505-MW0013-025.5										
	Alias/S.I.	IW-11S (5-15)		IW-12IS (23-28)			IW-13IS (23-28)										
	Date	11/20/03	12/17/09	5/25/10	11/9/10	5/2/11	5/25/10	11/9/10	5/2/11	11/14/13	2/18/14	05/29/14	08/14/14	11/24/14	02/24/15	05/19/15	09/28/15
	KSC RIS Sample ID	M505-MW0011-015.0-20031120	M505-MW0011-010.0-20091217	M505-MW0012-025.5-20100525	M505-MW0012-025.5-20101109	M505-MW0012-025.5-20110502	M505-MW0013-025.5-20100525	M505-MW0013-025.5-20101109	M505-MW0013-025.5-20110502	M505-MW0013-025.5-20131114	M505-MW0013-025.5-20140218	M505-MW0013-025.5-20140529	M505-MW0013-025.5-20140814	M505-MW0013-025.5-20141124	M505-MW0013-025.5-20150224	M505-MW0013-025.5-20150519	M505-MW0013-025.5-20150928
Volatile Organics (µg/l)	**GCTL***																
1,1-Dichloroethane	70	<1.0	<0.56	<0.64	<0.130	<0.300	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<1.0	<0.16	<0.59	<0.160	<0.160	<0.59	<0.160	<0.160	1.5	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<1.0	<0.52	<0.42	<0.210	<0.210	<0.42	<0.210	<0.210	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
cis-1,2-Dichloroethene	70	<1.0	<0.12	3.9	5.91	16.7	**79**	58.1	**126**	**560**	13	0.81 I	0.71 I	2.3	<0.36	0.68 I	6.3
Ethylbenzene	30	<1.0	<0.10	<0.43	<0.210	<0.210	<0.43	<0.210	<0.210	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21	< 0.21
Tetrachloroethene	3	<1.0	<0.22	<0.43	<0.110	<0.220	<0.43	<0.110	<0.220	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	< 0.22	0.65 I
Toluene	40	<1.0	<0.52	<0.41	<0.190	<0.190	<0.41	<0.190	<0.190	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19
trans-1,2-Dichloroethene	100	<1.0	<0.13	<0.45	<0.120	0190 I	2.7	2.03	4.68	35	0.59 I	< 0.19	< 0.19	< 0.19	< 0.19	< 0.19	0.44 I
Trichloroethene	3	<1.0	<0.15	<0.63	<0.160	<0.360	<0.63	<0.160	**26.7**	1.1	<0.36	< 0.36	<0.36	**4.5**	<0.36	<0.36	**20**
Vinyl Chloride	1	<1.0	<0.25	<0.52	<0.220	<0.360	<0.52	<0.220	<0.360	**7.3**	<0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36	< 0.36
Xylenes (Total)	20	<1.0	<0.22	< 0.85	<0.410	<0.310	< 0.85	<0.410	<0.310	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	< 0.31	0.40 I

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0014-009.0		MW0015-0.25.0					MW0016-036.0					
	Alias/S.I.	IW-14S (4-14)		MW0015IS (22.5-27.5)					MW0016I (33.5-38.5)					
	Date	11/20/03	12/17/09	5/26/10	11/10/10	5/2/11	1/8/13	05/29/14	5/26/10	11/10/10	5/2/11	1/8/13	05/29/14	05/19/15
	KSC RIS Sample ID	M505-MW0014-014.0-20031120	M505-MW0014-009.0-20091217	M505-MW0015-025.0-20100526	M505-MW0015-025.0-20101110	M505-MW0015-025.0-20110502	M505-MW0015-025.0-20130108	M505-MW0015-025.0-20140529	M505-MW0016-036.0-20100526	M505-MW0016-036.0-20101110	M505-MW0016-036.0-20110502	M505-MW0016-036.0-20130108	M505-MW0016-036.0-20140529	M505-MW0016-036.0-20150519
Volatile Organics (µg/l)	**GCTL***													
1,1-Dichloroethane	70	<1.0	<0.56	<0.64	<0.130	<0.300	<0.30	<0.30	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<1.0	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16
Benzene	1	<1.0	<0.52	<0.42	<0.210	<0.210	<0.21	<0.21	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	<1.0	<0.12	16	31.3	33.1	3.9	0.55 I	**73**	**87.7**	**124**	1.9	0.81 I	33
Ethylbenzene	30	<1.0	<0.10	<0.43	<0.210	<0.210	<0.21	<0.21	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21
Tetrachloroethene	3	<1.0	<0.22	<0.43	<0.110	<0.220	<0.22	<0.22	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22
Toluene	40	<1.0	<0.52	<0.41	<0.190	0.550 I	<0.19	<0.19	<0.41	<0.190	0.450 I	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	<1.0	<0.13	0.57 I	1.38	1.50	<0.19	<0.19	1.5	1.88	3.02	<0.19	<0.19	1.7
Trichloroethene	3	<1.0	<0.15	<0.63	<0.160	<0.360	<0.36	<0.36	2.3	2.32	**3.72**	<0.36	<0.36	<0.36
Vinyl Chloride	1	<1.0	<0.25	<0.52	<0.220	<0.360	<0.36	<0.36	<0.52	<0.220	<0.360	<0.36	<0.36	<0.36
Xylenes (Total)	20	<1.0	<0.22	< 0.85	<0.410	<0.310	<0.31	<0.31	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0017-025.0					MW0018-036.0						
	Alias/S.I.	MW0017IS (22.5-27.5)					MW0018I (33.5-38.5)						
	Date	5/25/10	11/10/10	5/2/11	1/7/13	05/29/14	5/25/10	11/10/10	5/2/11	1/7/13	05/29/14	05/19/15	09/29/15
	KSC RIS Sample ID	M505-MW0017-025.0-20100525	M505-MW0017-025.0-20101110	M505-MW0017-025.0-20110502	M505-MW0017-025.0-20130107	M505-MW0017-025.0-20140529	M505-MW0018-036.0-20100525	M505-MW0018-036.0-20101110	M505-MW0018-036.0-20110502	M505-MW0018-036.0-20130107	M505-MW0018-036.0-20140529	M505-MW0018-036.0-20150519	M505-MW0018-036.0-20150929
Volatile Organics (µg/l)	**GCTL***												
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	38	28.2	23.4	3.0	<0.36	**82**	**96.4**	**126**	20	1.4	23	19
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.21	<0.21	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.22	<0.22	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22	0.28 I
Toluene	40	<0.41	<0.190	<0.190	<0.19	<0.19	<0.41	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	3.1	1.13	1.34	0.21 I	<0.19	1.2	<0.120	0.990 I	0.63 I	<0.19	1.0	0.82 I
Trichloroethene	3	1.5	<0.160	<0.360	<0.36	<0.36	2.0	1.50	2.49	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	**6.2**	0.940 I	<0.360	<0.36	<0.36	**14**	**8.60**	**9.55**	1.3	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.31	<0.31	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0019-025.0													
	Alias/S.I.	MW0019IS (22.5-27.5)													
	Date	5/26/10	11/10/10	5/2/11	11/10/11	4/17/12	7/24/12	10/9/12	1/9/13	4/23/13	11/13/13	2/18/14	05/28/14	08/13/14	05/20/15
	KSC RIS Sample ID	M505-MW0019-025.0-20100526	M505-MW0019-025.0-20101110	M505-MW0019-025.0-20110502	M505-MW0019-025.0-20111110	M505-MW0019-025.0-20120417	M505-MW0019-025.0-20120724	M505-MW0019-025.0-20121009	M505-MW0019-025.0-20130109	M505-MW0019-025.0-20130423	M505-MW0019-025.0-20131113	M505-MW0019-025.0-20140218	M505-MW0019-025.0-20140528	M505-MW0019-025.0-20140813	M505-MW0019-025.0-20150520
Volatile Organics (µg/l)	**GCTL***														
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<1.50	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	4.0	1.24	3.88	<0.160	<0.800	<0.160	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<1.05	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**3,700**	**1,070**	**421**	**319**	**588**	**441**	**208**	55	34	**430**	**84**	25	23	22
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<1.05	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<1.10	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22
Toluene	40	<0.41	<0.190	<0.190	<0.190	<0.950	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	42	14	26.5	21.6	7.9	9.79	6.08	1.6	0.5 I	13	2.5	1.4	1.3	1.2
Trichloroethene	3	<0.63	<0.160	<0.360	<0.360	<1.80	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	**2.7**	**2.64**	**6.98**	<0.360	<1.80	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<1.55	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0020-036.0														
	Alias/S.I.	MW0020I (33.5-38.5)														
	Date	5/26/10	11/10/10	5/2/11	11/10/11	4/17/12	7/24/12	10/9/12	1/9/13	4/23/13	11/13/13	2/18/14	05/28/14	08/13/14	05/20/15	09/29/15
	KSC RIS Sample ID	M505-MW0020-036.0-20100526	M505-MW0020-036.0-20101110	M505-MW0020-036.0-20110502	M505-MW0020-036.0-2011110	M505-MW0020-036.0-20120417	M505-MW0020-036.0-20120724	M505-MW0020-036.0-20121009	M505-MW0020-036.0-20130109	M505-MW0020-036.0-20130423	M505-MW0020-036.0-20131113	M505-MW0020-036.0-20140218	M505-MW0020-036.0-20140528	M505-MW0020-036.0-20140813	M505-MW0020-036.0-20150520	M505-MW0020-036.0-20150929
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.160	<0.160	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**300**	**433**	**402**	**728**	**73.9**	**177.0**	**117**	12	9.4	**280**	8.5	1.5	4.8	**160**	**120**
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.69 I
Toluene	40	<0.41	0.300 I	<0.190	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	5.6	6.96	7.47	15.2	1.7	3.96	2.39	0.23 I	0.24 I	9.0	0.32 I	<0.19	0.29 I	6.8	5.1
Trichloroethene	3	<0.63	<0.160	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	<0.52	<0.220	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	0.42 I	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	0.42 I

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0021-025.0							MW0022-025.0									
	Alias/S.I.	MW0021IS (22.5-27.5)							MW0022IS (22.5-27.5)									
	Date	5/26/10	11/11/10	5/2/11	1/7/13	05/29/14	05/19/15	09/29/15	5/26/10	11/10/10	5/2/11	11/8/11	4/17/12	7/24/12	10/9/12	1/7/13	4/23/13	5/28/14	9/29/15
	KSC RIS Sample ID	M505-MW0021-025.0-20100526	M505-MW0021-025.0-20101110	M505-MW0021-025.0-20110502	M505-MW0021-025.0-20130107	M505-MW0021-025.0-20140529	M505-MW0021-025.0-20150519	M505-MW0021-025.0-20150929	M505-MW0022-025.0-20100526	M505-MW0022-025.0-20101110	M505-MW0022-025.0-20110502	M505-MW0022-025.0-20111108	M505-MW0022-025.0-20120417	M505-MW0022-025.0-20120724	M505-MW0022-025.0-20121009	M505-MW0022-025.0-20130107	M505-MW0022-025.0-20130423	M505-MW0022-025.0-20140528	M505-MW0022-025.0-20150929
Volatile Organics (µg/l)	**GCTL***																		
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	<0.3	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.59	<0.160	<0.160	<0.160	<0.160	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	1.5	<0.360	0.700 I	<0.36	<0.36	0.38 I	<0.36	<0.48	<0.360	<0.360	<0.360	<0.360	0.510 I	<0.360	0.52 I	1.2	0.62 I	4.0
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22	<0.22	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	<0.22	<0.22	0.38 I
Toluene	40	<0.41	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.41	<0.190	<0.190	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	5.6	<0.120	<0.190	<0.19	<0.19	<0.19	<0.19	<0.45	<0.120	<0.190	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19
Trichloroethene	3	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.36	<0.63	<0.160	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	**50**	<0.220	<0.360	<0.36	<0.36	**1.6**	<0.36	<0.52	<0.220	<0.360	**24.9**	<0.360	<0.360	<0.360	<0.36	1.3	<0.36	**7.3**
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0023-025.0																
	Alias/S.I.	MW0023IS (22.5-27.5)																
	Date	5/25/10	11/11/10	5/2/11	11/10/11	4/17/12	7/23/12	10/9/12	1/9/13	4/24/13	11/13/13	2/17/14	5/28/14	8/15/14	11/25/14	2/24/15	5/19/15	9/28/15
	KSC RIS Sample ID	M505-MW0023-025.0-20100525	M505-MW0023-025.0-20101111	M505-MW0023-025.0-20110502	M505-MW0023-025.0-20111110	M505-MW0023-025.0-20120417	M505-MW0023-025.0-20120723	M505-MW0023-025.0-20121009	M505-MW0023-025.0-20130109	M505-MW0023-025.0-20130424	M505-MW0023-025.0-20131113	M505-MW0023-025.0-20140217	M505-MW0023-025.0-20140528	M505-MW0023-025.0-20140815	M505-MW0023-025.0-20141125	M505-MW0023-025.0-20150224	M505-MW0023-025.0-20150519	M505-MW0023-025.0-2015928
Volatile Organics (µg/l)	**GCTL***																	
1,1-Dichloroethane	70	< 6.4	<0.130	<0.300	<0.300	<1.20	<1.20	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	6.6 I	6.18	4.54	3.02	<0.640	1.00	<0.600	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	< 4.2	<0.210	<0.210	<0.210	<0.840	<0.840	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**1,600**	**1,420**	**3,370**	**835**	**281**	**356**	10.3	14	5.6	6.6	3.3	1.4	0.99 I	5.7	5.5	0.93 I	3.8
Ethylbenzene	30	< 4.3	<0.210	<0.210	<0.210	<0.840	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 4.3	<0.110	<0.220	<0.220	<0.880	<0.220	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.34 IV	<0.22	0.36 I
Toluene	40	< 4.1	0.379 I	0.280 I	<0.190	<0.760	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	26	23.9	25.5	25.5	7.6	18.30	1.36	1.4	0.47 I	0.45 I	0.33 I	<0.19	<0.19	0.37 I	0.31 I	<0.19	<0.19
Trichloroethene	3	**160**	**191**	**137**	**94.9**	**9.92**	**13.20**	<0.360	0.52 I	<0.36	<0.36	<0.36	<0.36	<0.36	**4.4**	0.42 I	<0.36	<0.36
Vinyl Chloride	1	**120**	**128**	**43.6**	**41.9**	**14.8**	**32.7**	**4.41**	**3.4**	**1.8**	**2.5**	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 8.5	<0.410	<0.310	<0.310	<1.24	<0.310	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0024-035.0														
	Alias/S.I.	MW0024I (32.5-37.5)														
	Date	5/25/10	11/11/10	5/3/11	11/8/11	4/17/12	7/23/12	10/9/12	1/9/13	4/24/13	11/13/13	2/17/14	5/28/14	8/15/14	11/25/14	2/24/15
	KSC RIS Sample ID	M505-MW0024-035.0-20100525	M505-MW0024-035.0-20101111	M505-MW0024-035.0-20110503	M505-MW0024-035.0-20111108	M505-MW0024-035.0-20120417	M505-MW0024-035.0-20120723	M505-MW0024-035.0-20121009	M505-MW0024-035.0-20130109	M505-MW0024-035.0-20130424	M505-MW0024-035.0-20131113	M505-MW0024-035.0-20140217	M505-MW0024-035.0-20140528	M505-MW0024-035.0-20140815	M505-MW0024-035.0-20141125	M505-MW0024-035.0-20150224
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.160	<0.160	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	4.6	20.6	19.6	6.30	1.00	4.72	11.3	7.7	1.6	48	1.6	0.63 I	0.63 I	0.37 I	13
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.30 IV
Toluene	40	<0.41	<0.190	0.270 I	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	<0.45	<0.120	<0.190	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	1.6 I	<0.19	<0.19	<0.19	<0.19	0.53 I
Trichloroethene	3	<0.63	<0.160	0.500 I	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	0.47 I	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	<0.52	<0.220	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0025-025.0																
	Alias/S.I.	MW0025IS (22.5-27.5)																
	Date	5/26/10	11/9/10	5/3/11	11/14/11	4/18/12	7/23/12	10/9/12	1/8/13	4/23/13	11/12/13	2/19/14	5/27/14	8/13/14	11/24/14	2/24/15	5/19/15	9/29/15
	KSC RIS Sample ID	M505-MW0025-025.0-20100526	M505-MW0025-025.0-20101109	M505-MW0025-025.0-20110503	M505-MW0025-025.0-20111114	M505-MW0025-025.0-20120418	M505-MW0025-025.0-20120723	M505-MW0025-025.0-20121009	M505-MW0025-025.0-20130108	M505-MW0025-025.0-20130423	M505-MW0025-025.0-20131112	M505-MW0025-025.0-20140219	M505-MW0025-025.0-20140527	M505-MW0025-025.0-20140813	M505-MW0025-025.0-20141124	M505-MW0025-025.0-20150224	M505-MW0025-025.0-20150519	M505-MW0025-025.0-20150929
Volatile Organics (µg/l)	**GCTL***																	
1,1-Dichloroethane	70	< 3.2	<0.130	<0.300	<0.300	<3.00	<0.300	<0.600	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 3.0	<0.160	0.890 I	1.17	<1.60	<0.160	<0.320	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	< 2.1	<0.210	<0.210	<0.210	<2.10	<2.10	<0.420	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**540**	**894**	**1,350**	**1,580**	**987**	**489**	**249**	**280**	**190**	**470**	**350**	**250**	**150**	24	**160**	**250**	**270**
Ethylbenzene	30	< 2.2	<0.210	<0.210	<0.210	<2.10	<0.210	<0.420	3.5	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	0.21 I	<0.21	<0.21
Tetrachloroethene	3	< 2.2	<0.110	<0.220	<0.220	<2.20	<0.220	<0.440	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.32 IV	<0.22	0.35 I
Toluene	40	< 2.1	<0.190	0.270 I	0.810 I	<1.90	<0.190	<0.380	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	9.3	4.92	4.77	5.02	6.90 I	9.12	4.94	<0.19	3.8	10	13	6.2	4.2	1.0	3.8	7.5	8.4
Trichloroethene	3	< 3.2	<0.160	<0.360	<0.360	<3.60	<0.360	<0.720	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	< 2.6	<0.220	0.890 I	<0.360	<3.60	<0.360	<0.720	<0.36	<0.36	<0.36	<0.36	0.41 I	<0.36	<0.36	<0.36	<0.36	0.66 I
Xylenes (Total)	20	< 4.3	<0.410	<0.310	<0.310	<3.10	<0.310	<0.620	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0026-035.0														
	Alias/S.I.	MW0026I (32.5-37.5)														
	Date	5/26/10	11/9/10	5/3/11	11/14/11	4/18/12	7/23/12	10/9/12	1/8/13	4/23/13	11/12/13	2/19/14	5/27/14	8/13/14	11/24/14	2/24/15
	KSC RIS Sample ID	M505-MW0026-035.0-20100526	M505-MW0026-035.0-20101109	M505-MW0026-035.0-20110503	M505-MW0026-035.0-20111114	M505-MW0026-035.0-20120418	M505-MW0026-035.0-20120723	M505-MW0026-035.0-20121009	M505-MW0026-035.0-20130108	M505-MW0026-035.0-20130423	M505-MW0026-035.0-2013112	M505-MW0026-035.0-20140219	M505-MW0026-035.0-20140527	M505-MW0026-035.0-20140813	M505-MW0026-035.0-20141124	M505-MW0026-035.0-20150224
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.160	<0.160	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	26	24.8	39.3	29.1	8.7	16.0	14.0	18	19	8.7	12	7.1	11	7.7	6.1
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.28 IV
Toluene	40	<0.41	<0.190	0.290 I	0.790 I	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	< 0.45	<0.120	<0.190	<0.190	<0.190	<0.190	<0.190	<0.19	<0.19	<0.19	0.28 I	<0.19	0.30 I	<0.19	<0.19
Trichloroethene	3	<0.63	<0.160	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	<0.52	<0.220	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0027-025.0							MW0028-025.0							MW0029-025.0				
	Alias/S.I.	MW0027IS (22.5-27.5)							MW0028IS (22.5-27.5)							MW0029IS (22.5-27.5)				
	Date	5/26/10	11/10/10	5/3/11	1/7/13	5/28/14	5/20/15	9/29/15	5/26/10	11/9/10	5/3/11	1/7/13	5/28/14	5/20/15	9/29/15	5/26/10	11/9/10	5/3/11	5/28/14	5/20/15
	KSC RIS Sample ID	M505-MW0027-025.0-20100526	M505-MW0027-025.0-20101110	M505-MW0027-025.0-20110503	M505-MW0027-025.0-20130107	M505-MW0027-025.0-20140528	M505-MW0027-025.0-20150520	M505-MW0027-025.0-20150929	M505-MW0028-025.0-20100526	M505-MW0028-025.0-20101109	M505-MW0028-025.0-20110503	M505-MW0028-025.0-20130107	M505-MW0028-025.0-20140528	M505-MW0028-025.0-20150520	M505-MW0028-025.0-20150929	M505-MW0029-025.0-20100526	M505-MW0029-025.0-20101109	M505-MW0029-025.0-20110503	M505-MW0029-025.0-20140528	M505-MW0029-025.0-20150520
Volatile Organics (µg/l)	**GCTL***																			
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.64	<0.130	<0.300	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.42	<0.210	<0.210	<0.21	<0.21
cis-1,2-Dichloroethene	70	<0.38	<3.60	<0.360	0.38 I	<0.36	0.67 I	0.52 I	0. 76 I	1.58	1.24	1.4	1.8	2.3	3.3	< 0.48	<0.360	<0.360	5.6	1.9
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.43	<0.210	<0.210	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	0.220 I	<0.22	<0.22	<0.22	0.38 I	<0.43	<0.110	<0.220	<0.22	0.23 I	<0.22	0.25 I	<0.43	<0.110	0.270 I	<0.22	<0.22
Toluene	40	<0.41	<0.190	0.350 I	<0.19	<0.19	<0.19	<0.19	<0.41	<0.190	0.340 I	<0.19	<0.19	<0.19	<0.19	<0.41	<0.190	0.450 I	<0.19	<0.19
trans-1,2-Dichloroethene	100	< 0.45	<0.120	<0.190	<0.19	<0.19	<0.19	<0.19	< 0.45	<0.120	<0.190	<0.19	<0.19	<0.19	<0.19	< 0.45	<0.120	<0.190	<0.19	<0.19
Trichloroethene	3	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.36	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.36	<0.63	<0.160	<0.360	<0.36	<0.36
Vinyl Chloride	1	**11**	**15.4**	**17.9**	**7.7**	**3.0**	**1.7**	1.3	**42**	**19.6**	**28.3**	**72**	**87**	**83**	**50**	<0.52	<0.220	<0.360	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31	< 0.85	<0.410	<0.310	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0030-025.0						MW0031-025.0		
	Alias/S.I.	MW0030IS (22.5-27.5)						MW0031IS (22.5-27.5)		
	Date	5/26/10	11/9/10	5/3/11	5/29/14	5/20/15	9/29/15	5/26/10	11/9/10	5/4/11
	KSC RIS Sample ID	M505-MW0030-025.0-20100526	M505-MW0030-025.0-20101109	M505-MW0030-025.0-20110503	M505-MW0030-025.0-20140529	M505-MW0030-025.0-20150520	M505-MW0030-025.0-20150929	M505-MW0031-025.0-20100526	M505-MW0031-025.0-20101109	M505-MW0031-025.0-20110504
Volatile Organics (µg/l)	**GCTL***									
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.64	<0.130	<0.300
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.59	<0.160	<0.160
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.42	<0.210	<0.210
cis-1,2-Dichloroethene	70	0. 92 I	1.27	3.04	31	17	18	< 0.48	<0.360	<0.360
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.43	<0.210	<0.210
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.22	<0.22	0.29 I	<0.43	<0.110	<0.220
Toluene	40	<0.41	<0.190	0.200 I	<0.19	<0.19	<0.19	<0.41	<0.190	<0.190
trans-1,2-Dichloroethene	100	< 0.45	<0.120	<0.190	0.25 I	<0.19	<0.19	< 0.45	<0.120	<0.190
Trichloroethene	3	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.63	<0.160	<0.360
Vinyl Chloride	1	<0.52	<0.220	<0.360	<0.36	<0.36	<0.36	<0.52	<0.220	<0.360
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	< 0.85	<0.410	<0.310

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0032-035.0																
	Alias/S.I.	MW0032I (32.5-37.5)																
	Date	5/26/10	11/9/10	5/3/11	11/14/11	4/17/12	7/23/12	10/9/12	1/8/13	4/24/13	11/12/13	2/17/14	5/28/14	8/13/14	11/24/14	2/24/15	5/19/15	9/28/15
	KSC RIS Sample ID	M505-MW0032-035.0-20100526	M505-MW0032-035.0-20101109	M505-MW0032-035.0-20110503	M505-MW0032-035.0-20111114	M505-MW0032-035.0-20120417	M505-MW0032-035.0-20120723	M505-MW0032-035.0-20121009	M505-MW0032-035.0-20130108	M505-MW0032-035.0-20130424	M505-MW0032-035.0-20131112	M505-MW0032-035.0-20140217	M505-MW0032-035.0-20140528	M505-MW0032-035.0-20140813	M505-MW0032-035.0-20141124	M505-MW0032-035.0-20150224	M505-MW0032-035.0-20150519	M505-MW0032-035.0-20150928
Volatile Organics (µg/l)	**GCTL***																	
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.660	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.160	<0.160	<0.160	<0.320	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.420	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**170**	**343**	**132**	**320**	**84.4**	**109**	**184**	**170**	1.8	**260**	**190**	**170**	67	**220**	**190**	**120**	**220**
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.420	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.440	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22	0.26 IV	<0.22	0.27 I
Toluene	40	<0.41	<0.190	0.350 I	0.910 I	<0.190	<0.190	<0.380	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	0. 97 I	1.01	<0.190	0.650 I	0.280 I	0.420 I	<0.380	0.51 I	< 0.19	1.0	2.1	0.45 I	0.31 I	0.78 I	0.92 I	0.60 I	0.81 I
Trichloroethene	3	<0.63	<0.160	<0.360	<0.360	<0.360	<0.360	<0.720	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	**170**	**156**	**241**	**123**	**25.5**	**16.4**	**30.9**	**13**	0.47 I	**32**	**25**	**8.7**	**5.5**	**25**	**29**	**11**	**35**
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.620	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0033-025.0																
	Alias/S.I.	MW0033IS (22.5-27.5)																
	Date	5/26/10	11/9/10	5/3/11	11/14/11	4/17/12	7/23/12	10/9/12	1/8/13	4/24/13	11/12/13	2/17/14	5/28/14	8/13/14	11/24/14	2/24/15	5/19/15	9/28/15
	KSC RIS Sample ID	M505-MW0033-025.0-20100526	M505-MW0033-025.0-20101109	M505-MW0033-025.0-20110503	M505-MW0033-025.0-20111114	M505-MW0033-025.0-20120417	M505-MW0033-025.0-20120723	M505-MW0033-025.0-20121009	M505-MW0033-025.0-20130108	M505-MW0033-025.0-20130424	M505-MW0033-025.0-20131112	M505-MW0033-025.0-20140217	M505-MW0033-025.0-20140528	M505-MW0033-025.0-20140813	M505-MW0033-025.0-20141124	M505-MW0033-025.0-20141124	M505-MW0033-025.0-20150519	M505-MW0033-025.0-20150928
Volatile Organics (µg/l)	**GCTL***																	
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	0.190 I	0.210 I	0.210 I	0.350 I	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	47	**76.3**	**94.5**	**97.4**	**79.7**	**116.0**	40.4	34	24	8.6	13	42	26	17	46	32	55
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22	0.26 IV	0.23 I	<0.22
Toluene	40	<0.41	<0.190	0.350 I	0.910 I	<0.190	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	1.7	1.63	2.67	2.43	1.65	1.94	0.930 I	0.89 I	0.55 I	0.50 I	0.43 I	0.75 I	0.48 I	0.46 I	0.97 I	0.74 I	0.74 I
Trichloroethene	3	069 I	<0.160	1.47	2.23	2.40	**3.50**	0.680 I	1.6	0.86 I	0.56 I	0.38 I	1.3	**0.81 I**	**4.7**	0.86 I	0.36 I	0.97 I
Vinyl Chloride	1	**48**	**67.3**	**69.8**	**39.9**	**17.2**	**23.2**	**6.61**	**7.5**	**2.8**	**1.5**	< 0.36	**2.8**	0.85 I	0.62 I	4.2	0.62 I	**11**
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31	<0.31	1.2	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0034-025.0			MW0035-025.0											
	Alias/S.I.	MW0034IS (22.5-27.5)			MW0035IS (22.5-27.5)											
	Date	5/26/10	11/9/10	5/4/11	5/25/10	11/10/10	5/4/11	1/9/13	11/12/13	2/19/14	5/27/14	8/15/14	11/25/14	2/24/15	5/19/15	9/29/15
	KSC RIS Sample ID	M505-MW0034-025.0-20100526	M505-MW0034-025.0-20101109	M505-MW0034-025.0-20110504	M505-MW0035-025.0-20100525	M505-MW0035-025.0-20101110	M505-MW0035-025.0-20110504	M505-MW0035-025.0-20130109	M505-MW0035-025.0-20131112	M505-MW0035-025.0-20140219	M505-MW0035-025.0-20140527	M505-MW0035-025.0-20140815	M505-MW0035-025.0-20141125	M505-MW0035-025.0-20150224	M505-MW0035-025.0-20150519	M505-MW0035-025.0-20150929
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	< 1.3	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	< 1.2	<0.160	0.500 I	<0.16	<0.16	<0.16	0.24 I	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	< 0.84	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	0.61 I	<0.360	0.690 I	**220**	**197**	**197**	**90**	**120**	<0.36	**150**	**140**	70	37	66	**71**
Ethylbenzene	30	<0.43	<0.210	<0.210	< 0.86	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.43	<0.110	<0.220	< 0.86	<0.110	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.39 I
Toluene	40	<0.41	<0.190	<0.190	< 0.82	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	< 0.45	<0.120	<0.190	3.6	2.24	3.17	1.7	1.5	<0.19	1.7	1.7	1.0	1.1	1.8	3.9
Trichloroethene	3	<0.63	<0.160	<0.360	**62**	**54.7**	**49.1**	**16**	**20**	<0.36	**18**	**12**	**6.5**	2.0	3.4	**3.9**
Vinyl Chloride	1	<0.52	<0.220	<0.360	< 1.1	<0.220	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	< 1.7	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0036-35.0										MW0037-010.0				
	Alias/S.I.	MW0036I (32.5-37.5)										MW0037S (5.0-15.0)				
	Date	5/25/10	11/10/10	5/4/11	1/9/13	11/12/13	2/19/14	5/27/14	8/15/14	11/25/14	2/24/15	5/26/10	11/11/10	5/4/11	1/7/13	5/29/14
	KSC RIS Sample ID	M505-MW0036-035.0-20100525	M505-MW0036-035.0-20101110	M505-MW0036-035.0-20110504	M505-MW0036-035.0-20130109	M505-MW0036-035.0-20131112	M505-MW0036-035.0-20140219	M505-MW0036-035.0-20140527	M505-MW0036-035.0-20140815	M505-MW0036-035.0-20141125	M505-MW0036-035.0-20150224	M505-MW0037-010.0-20100526	M505-MW0037-010.0-20101111	M505-MW0037-010.0-20110504	M505-MW0037-010.0-20130107	M505-MW0037-010.0-20140529
Volatile Organics (µg/l)	**GCTL***															
1,1-Dichloroethane	70	<0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.64	<0.130	<0.300	<0.30	<0.30
1,1-Dichloroethene	7	<0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.59	<0.160	<0.160	<0.16	<0.16
Benzene	1	<0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.42	<0.210	<0.210	<0.21	<0.21
cis-1,2-Dichloroethene	70	<0.48	<0.360	0.940 I	2.0	3.9	4.0	3.1	2.8	2.4	1.7	<0.48	<0.360	<0.360	<0.36	<0.36
Ethylbenzene	30	<0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	**31**	16.7	24	**32**	2.5
Tetrachloroethene	3	<0.43	<0.110	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.43	<0.110	<0.220	<0.22	<0.22
Toluene	40	<0.41	<0.190	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.41	<0.190	0.500 I	0.24 I	<0.19
trans-1,2-Dichloroethene	100	< 0.45	<0.120	<0.190	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	< 0.45	<0.120	2.67	<0.19	<0.19
Trichloroethene	3	<0.63	<0.160	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.63	<0.160	<0.360	<0.36	<0.36
Vinyl Chloride	1	<0.52	<0.220	0.500 I	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.52	<0.220	<0.360	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	**290**	**167**	**152.9**	**271.1**	**30**

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0038-025.0													
	Alias/S.I.	MW0038IS (22.5-27.5)													
	Date	5/26/10	11/9/10	5/4/11	11/15/11	4/17/12	7/24/12	10/9/12	1/8/13	4/24/13	11/13/13	2/18/14	5/28/14	8/14/14	9/29/15
	KSC RIS Sample ID	M505-MW0038-025.0-20100526	M505-MW0038-025.0-20101109	M505-MW0038-025.0-20110504	M505-MW0038-025.0-20111115	M505-MW0038-025.0-20120417	M505-MW0038-025.0-20120724	M505-MW0038-025.0-20121009	M505-MW0038-025.0-20130108	M505-MW0038-025.0-20130424	M505-MW0038-025.0-20131113	M505-MW0038-025.0-20140218	M505-MW0038-025.0-20140528	M505-MW0038-025.0-20140814	M505-MW0038-025.0-20150929
Volatile Organics (µg/l)	**GCTL***														
1,1-Dichloroethane	70	< 3.2	<0.130	<0.300	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.30	< 0.30	< 0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 3.0	<0.160	0.940 I	0.210 I	<0.160	<0.160	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16
Benzene	1	< 2.1	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**780**	**616**	**566**	**165**	**244**	**190**	**121**	**96**	16	38	46	17	16	3.5
Ethylbenzene	30	< 2.2	<0.210	<0.210	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 2.2	<0.110	<0.220	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	0.52 I
Toluene	40	< 2.1	<0.190	0.190 I	0.810 I	<0.190	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	14	9.66	9.69	5.62	8.87	6.32	3.37	2.6	0.4 I	1.3	1.6	0.64 I	0.58 I	0.21 I
Trichloroethene	3	< 3.2	<0.160	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	< 2.6	<0.220	<0.360	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 4.3	<0.410	<0.310	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0039-032.5											
	Alias/S.I.	MW0039IS (30.0-35.0)											
	Date	5/25/10	11/10/10	5/4/11	1/7/13	11/14/13	2/18/14	5/29/14	8/14/14	11/24/14	2/24/15	5/20/15	9/28/15
	KSC RIS Sample ID	M505-MW0039-032.5-20100525	M505-MW0039-032.5-20101110	M505-MW0039-032.5-20110504	M505-MW0039-032.5-20130107	M505-MW0039-032.5-20131114	M505-MW0039-032.5-20140218	M505-MW0039-032.5-20140529	M505-MW0039-032.5-20140814	M505-MW0039-032.5-20141124	M505-MW0039-032.5-20150224	M505-MW0039-032.5-20150520	M505-MW0039-032.5-20150928
Volatile Organics (µg/l)	**GCTL***												
1,1-Dichloroethane	70	< 0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 0.59	0.670 I	0.940 I	0.79 I	0.54 I	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	< 0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**85**	**119**	**164**	**160**	**110**	38	21	30	20	16	7	5
Ethylbenzene	30	< 0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 0.43	<0.110	0.230 I	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.57 I
Toluene	40	< 0.41	<0.190	0.380 I	0.28 I	0.28 I	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	1.2	2.11	3.72	5.3	4.8	1.2	0.33 I	0.66 I	0.78 I	0.72 I	1.1	0.78 I
Trichloroethene	3	**16**	**37.9**	**54.6**	**64**	**45**	**6.6**	3.2	**4.8**	**6.5**	3.4	**6.1**	**6.1**
Vinyl Chloride	1	< 0.52	<0.220	0.570 I	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	0.68 I	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	0.31 I

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0040-022.5										
	Alias/S.I.	MW0040IS (20.0-25.0)										
	Date	5/25/10	11/10/10	5/4/11	1/7/13	11/14/13	2/18/14	5/29/14	8/14/14	11/24/14	2/24/15	5/20/15
	KSC RIS Sample ID	M505-MW0040-022.5-20100525	M505-MW0040-022.5-20101110	M505-MW0040-022.5-20110504	M505-MW0040-022.5-20130107	M505-MW0040-022.5-20131114	M505-MW0040-022.5-20140218	M505-MW0040-022.5-20140529	M505-MW0040-022.5-20140814	M505-MW0040-022.5-20141124	M505-MW0040-022.5-20150224	M505-MW0040-022.5-20150520
Volatile Organics (µg/l)	**GCTL***											
1,1-Dichloroethane	70	< 0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 0.59	<0.160	<0.160	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	< 0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	13	13.1	12.0	3.3	1.5	8.3	12.0	12.0	6.1	6.8	1.5
Ethylbenzene	30	< 0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 0.43	<0.110	0.280 I	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Toluene	40	< 0.41	<0.190	0.250 I	0.22 I	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	1.2	1.01	1.19	5.3	0.58 I	0.57 I	0.25 I	0.36 I	0.21 I	0.36 I	0.31 I
Trichloroethene	3	1.9	1.64	1.36	0.96 I	0.76 I	1.4	1.5	2.3	**5.0**	1.7	1.9
Vinyl Chloride	1	< 0.52	<0.220	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	0.38 I	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0041-025.0											
	Alias/S.I.	MW0041IS (22.5-27.5)											
	Date	5/25/10	11/10/10	5/4/11	1/8/13	11/13/13	2/17/14	5/29/14	8/14/14	11/24/14	2/24/15	5/19/15	9/28/15
	KSC RIS Sample ID	M505-MW0041-025.0-20100525	M505-MW0041-025.0-20101110	M505-MW0041-025.0-20110504	M505-MW0041-025.0-20130108	M505-MW0041-025.0-20131113	M505-MW0041-025.0-20140217	M505-MW0041-025.0-20140529	M505-MW0041-025.0-20140814	M505-MW0041-025.0-20141124	M505-MW0041-025.0-20150224	M505-MW0041-025.0-20150519	M505-MW0041-025.0-20150928
Volatile Organics (µg/l)	**GCTL***												
1,1-Dichloroethane	70	< 1.3	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 1.2	<0.160	0.900 I	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	< 0.84	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**420**	**278**	**254**	23	**94**	66	39	37.0	3.8	11	6.1	7.9
Ethylbenzene	30	< 0.86	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 0.86	<0.110	<0.220	<0.22	<0.22	<0.22	<0.22	<0.22	0.23 IV	<0.22	<0.22	0.50 I
Toluene	40	< 0.82	<0.190	0.320 I	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	9.6	7.68	9.21	1.4	3.3	4.9	2.0	1.9	0.28 I	0.74 I	0.39 I	0.40 I
Trichloroethene	3	**72**	**52.1**	**44.5**	1.3	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	< 1.1	<0.220	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 1.7	<0.410	<0.310	<0.36	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	0.31 I

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	MW0042-035.0												M505-MW0043-027.5	
	Alias/S.I.	MW0042I (32.5-37.5)												MW0043IS (20.0-35.0)	
	Date	5/25/10	11/10/10	5/4/11	1/8/13	11/13/13	2/17/14	5/29/14	8/14/14	11/24/14	2/24/15	5/19/15	9/28/15	1/8/13	5/29/14
	KSC RIS Sample ID	M505-MW0042-035.0-20100525	M505-MW0042-035.0-20101110	M505-MW0042-035.0-20110504	M505-MW0042-035.0-20130108	M505-MW0042-035.0-20131113	M505-MW0042-035.0-20140217	M505-MW0042-035.0-20140529	M505-MW0042-035.0-20140814	M505-MW0042-035.0-20141124	M505-MW0042-035.0-20150224	M505-MW0042-035.0-20150519	M505-MW0042-035.0-20150928	M505-MW0043-027.5-20130108	M505-MW0043-027.5-20140529
Volatile Organics (µg/l)	**GCTL***														
1,1-Dichloroethane	70	< 0.64	<0.130	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	< 0.59	<0.160	0.420 I	0.45 I	0.45 I	<0.16	<0.16	<0.16	<0.16	<0.16	0.20 I	0.20 I	<0.16	<0.16
Benzene	1	< 0.42	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**190**	**253**	**227**	**180**	**91**	**77**	57	58	52	38	49	31	12	38
Ethylbenzene	30	< 0.43	<0.210	<0.210	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	< 0.43	<0.110	0.400 I	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.22 IV	<0.22	0.42 I	<0.22	<0.22
Toluene	40	< 0.41	<0.190	0.640 I	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	3.6	3.40	4.05	4.2	2.3	3.4	1.4	1.9	1.7	1.7	2.4	1.9	0.65 I	1.4
Trichloroethene	3	**26**	**27.2**	**21.2**	**17**	**7.6**	**7.4**	**4.3**	**6.1**	**7.5**	**5.4**	**9.0**	**7.9**	<0.36	<0.36
Vinyl Chloride	1	< 0.52	<0.220	<0.360	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	< 0.85	<0.410	<0.310	<0.36	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0044-027.5									M505-MW0045-034.5										
	Alias/S.I.	MW0044IS (20.0-35.0)									MW0045I (32.0-37.0)										
	Date	1/8/13	11/14/13	2/19/14	5/29/14	8/14/14	11/24/14	2/24/15	5/20/15	9/28/15	11/15/11	4/17/12	7/24/12	10/9/12	1/8/13	4/24/13	11/13/13	2/18/14	5/28/14	8/14/14	5/19/15
	KSC RIS Sample ID	M505-MW0044-027.5-20130108	M505-MW0044-027.5-20131114	M505-MW0044-027.5-20140219	M505-MW0044-027.5-20140529	M505-MW0044-027.5-20140814	M505-MW0044-027.5-201401124	M505-MW0044-027.5-20150224	M505-MW0044-027.5-20150520	M505-MW0044-027.5-20150928	M505-MW0045-034.5-20111115	M505-MW0045-034.5-20120417	M505-MW0045-034.5-20120724	M505-MW0045-034.5-20121009	M505-MW0045-034.5-20130108	M505-MW0045-034.5-20130424	M505-MW0045-034.5-20131113	M505-MW0045-034.5-20140218	M505-MW0045-034.5-20140528	M505-MW0045-034.5-20140814	M505-MW0045-034.5-20150519
Volatile Organics (µg/l)	**GCTL***																				
1,1-Dichloroethane	70	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.30	< 0.30	< 0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	0.45 I	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.160	<0.160	<0.160	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.19	<0.19	<0.19
Benzene	1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**190**	**96**	9.2	4.2	3.1	2.0	1.6	1.4	1.4	**189**	**173**	**152**	**136**	**140**	**93**	**72**	**84**	61	69	36
Ethylbenzene	30	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.22	<0.22	<0.22	<0.22	<0.22	0.22 IV	0.60 I	<0.22	<0.22	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22
Toluene	40	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	1.03	<0.190	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	9.2	4.0	0.38 I	0.27 I	0.21 I	0.20 I	0.30 I	0.31 I	0.31 I	2.93	3.80	3.12	3.41	3.3	2.7	2.4	3.5	1.9	1.9	1.8
Trichloroethene	3	**14**	<0.36	0.36 I	<0.36	<0.36	0.73 I	1.4	1.1	1.1	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36
Xylenes (Total)	20	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	0.33 I	<0.31	<0.31	0.570 I	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0046-010.0										M505-MW0047-027.5						
	Alias/S.I.	MW0046S (5.0-15.0)										MW0047IS (20.0-35.0)						
	Date	11/15/11	4/17/12	7/24/12	10/9/12	1/8/13	4/24/13	11/13/13	2/18/14	5/28/14	8/14/14	11/15/11	4/17/12	7/24/12	10/9/12	1/8/13	4/24/13	5/28/14
	KSC RIS Sample ID	M505-MW0046-010.0-20111115	M505-MW0046-010.0-20120417	M505-MW0046-010.0-20120724	M505-MW0046-010.0-20121009	M505-MW0046-010.0-20130108	M505-MW0046-010.0-20130424	M505-MW0046-010.0-20131113	M505-MW0046-010.0-20140218	M505-MW0046-010.0-20140528	M505-MW0046-010.0-20140814	M505-MW0047-027.5-20111115	M505-MW0047-027.5-20120417	M505-MW0047-027.5-20120724	M505-MW0047-027.5-20121009	M505-MW0047-027.5-20130108	M505-MW0047-027.5-20130424	M505-MW0047-027.5-20140528
Volatile Organics (µg/l)	**GCTL***																	
1,1-Dichloroethane	70	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.30	< 0.30	< 0.30	<0.30	<0.30	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.3	<0.30
1,1-Dichloroethene	7	<0.160	<0.160	<0.160	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.160	<0.160	<0.160	<0.160	<0.16	< 0.16	<0.16
Benzene	1	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
cis-1,2-Dichloroethene	70	23.8	31.8	2.5	<0.360	0.50 I	1.1	<0.36	<0.36	<0.36	<0.36	12.6	3.0	0.66	<0.360	0.85 I	< 0.36	<0.36
Ethylbenzene	30	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
Tetrachloroethene	3	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	<0.22
Toluene	40	0.680 I	<0.190	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	0.960 I	<0.190	<0.190	<0.190	<0.19	< 0.19	<0.19
trans-1,2-Dichloroethene	100	2.96	2.50	0.310 I	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.190	<0.190	<0.190	<0.190	<0.19	< 0.19	<0.19
Trichloroethene	3	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Vinyl Chloride	1	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	**3.77**	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Xylenes (Total)	20	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0048-027.5											
	Alias/S.I.	MW0048IS (20.0-35.0)											
	Date	11/15/11	4/18/12	7/24/12	10/9/12	1/7/13	4/24/13	11/13/13	2/18/14	5/28/14	8/14/14	5/19/15	9/29/15
	KSC RIS Sample ID	M505-MW0048-027.5-20111115	M505-MW0048-027.5-20120418	M505-MW0048-027.5-20120724	M505-MW0048-027.5-20121009	M505-MW0048-027.5-20130107	M505-MW0048-027.5-20130424	M505-MW0048-027.5-20131113	M505-MW0048-027.5-20140218	M505-MW0048-027.5-20140528	M505-MW0048-027.5-20140814	M505-MW0048-027.5-20150519	M505-MW0048-027.5-20150929
Volatile Organics (µg/l)	**GCTL***												
1,1-Dichloroethane	70	<0.300	<0.300	<0.300	<0.600	<0.30	< 0.30	< 0.30	< 0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	0.210 I	0.390 I	0.390 I	<0.320	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16	<0.16
Benzene	1	<0.210	<0.210	<0.210	<0.420	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**1270**	**532**	**397**	**276**	**340**	**300**	**190**	**73**	17	12	55	41
Ethylbenzene	30	<0.210	<0.210	<0.210	<0.420	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.220	<0.220	<0.220	<0.440	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22	0.38 I
Toluene	40	1.07	<0.190	<0.190	<0.380	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	3.37	6.51	8.67	8.80	12	7.8	5.7	3.9	0.99 I	0.59 I	1.8	1.4
Trichloroethene	3	<0.360	<0.360	<0.360	<0.720	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	1	**5.53**	**21.20**	**17.9**	**27.0**	**51**	**3.8**	**5.3**	< 0.36	<0.36	<0.36	<0.36	0.40 I
Xylenes (Total)	20	0.480 I	0.480 I	0.480 I	<0.630	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	0.45 I	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	Well ID	M505-MW0049-027.5								
	Alias/S.I.	MW0049IS (20.0-35.0)								
	Date	1/9/13	11/12/13	2/19/14	5/28/14	8/13/14	11/25/14	2/24/15	5/19/15	9/29/15
	KSC RIS Sample ID	M505-MW0049-027.5-20130109	M505-MW0049-027.5-20131112	M505-MW0049-027.5-20140219	M505-MW0049-027.5-20140528	M505-MW0049-027.5-20140813	M505-MW0049-027.5-20141125	M505-MW0049-027.5-20150224	M505-MW0049-027.5-20150519	M505-MW0049-027.5-20150929
Volatile Organics (µg/l)	**GCTL***									
1,1-Dichloroethane	70	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	7	0.67 I	<0.16	0.20 I	0.41 I	<0.16	<0.16	0.26 I	<0.16	<0.16
Benzene	1	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	70	**220**	**120**	**80**	**240**	**240**	**230**	**150**	**79**	**140**
Ethylbenzene	30	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	3	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.37 I
Toluene	40	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	100	2.7	1.4	1.3	2.5	2.9	1.7	1.7	1.6	2.1
Trichloroethene	3	**38**	**15**	**9.6**	**11**	**4.7**	**5.5**	1.0	0.61 I	0.39 I
Vinyl Chloride	1	<0.36	<0.36	<0.36	0.39 I	0.40 I	0.40 I	0.40 I	0.40 I	<0.36
Xylenes (Total)	20	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	M505-MW0050-010.0						
	MW0050S (5.0-15.0)						
	11/14/11	4/18/12	7/23/12	10/9/12	1/8/13	4/24/13	5/27/14
	M505-MW0050-010.0-20111114	M505-MW0050-010.0-20120418	M505-MW0050-010.0-20120723	M505-MW0050-010.0-20121009	M505-MW0050-010.0-20130108	M505-MW0050-010.0-20130424	M505-MW0050-010.0-20140527
Volatile Organics (µg/l)							
1,1-Dichloroethane	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.3	<0.30
1,1-Dichloroethene	<0.160	<0.160	<0.160	<0.160	<0.16	< 0.16	<0.16
Benzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
cis-1,2-Dichloroethene	2.10	8.62	4.20	2.95	26	13	7.0
Ethylbenzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
Tetrachloroethene	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	<0.22
Toluene	0.850 I	<0.190	<0.190	<0.190	<0.19	< 0.19	<0.19
trans-1,2-Dichloroethene	0.220 I	<0.190	0.200 I	<0.190	<0.19	< 0.19	0.53 I
Trichloroethene	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Vinyl Chloride	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Xylenes (Total)	0.320 I	<0.310	<0.310	<0.310	<0.31	< 0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	M505-MW0051-025.0													
	MW0051IS (22.5-27.5)													
	11/15/11	4/17/12	7/23/12	10/9/12	1/8/13	4/24/13	11/12/13	2/19/14	5/28/14	8/13/14	11/24/14	2/24/15	5/19/15	9/28/15
	M505-MW0051-025.0-20111115	M505-MW0051-025.0-20120417	M505-MW0051-025.0-20120723	M505-MW0051-025.0-20121009	M505-MW0051-025.0-20130108	M505-MW0051-025.0-20130424	M505-MW0051-025.0-20131112	M505-MW0051-025.0-20140219	M505-MW0051-025.0-20140528	M505-MW0051-025.0-20140813	M505-MW0051-025.0-20141124	M505-MW0051-025.0-20150224	M505-MW0051-025.0-20150519	M505-MW0051-025.0-20150928
Volatile Organics (µg/l)														
1,1-Dichloroethane	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	1.77	2.01	<0.160	0.490 I	<0.16	0.78 I	0.78 I	0.42 I	0.28 I	0.33 I	0.63 I	<0.16	<0.16	0.63 I
Benzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	**319**	**129**	**143**	**110**	**160**	**170**	**150**	64	46	47	**88**	46	25	6.0
Ethylbenzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22	<0.22	0.40 I	<0.22
Toluene	0.860 I	<0.190	<0.190	<0.190	<0.19	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	1.30	1.61	1.89	1.52	2.0	1.9	1.5	1.7	0.87 I	0.89 I	1.0	1.5	0.56 I	0.75 I
Trichloroethene	**13.5**	**16.3**	**7.5**	**10.2**	**13**	**11**	**8.1**	**9.2**	**6.1**	**7.1**	**9.9**	**3.8**	0.70 I	2.2
Vinyl Chloride	**72.5**	**34.7**	**31.6**	**30.0**	**37**	**45**	**50**	**29**	**20**	**24**	**45**	**19**	**5.6**	**8.3**
Xylenes (Total)	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	M505-MW0052-010.0									M505-MW0053-010.0				M505-MW0054-010.0						
	MW0052S (5.0-15.0)									MW0053S (5.0-15.0)				MW0054S (5.0-15.0)						
	1/9/13	11/12/13	2/19/14	5/28/14	8/13/14	11/24/14	2/24/15	5/19/15	9/28/15	1/8/13	5/28/14	5/19/15	9/28/15	11/14/11	4/17/12	7/23/12	10/9/12	1/8/13	4/24/13	5/28/14
	M505-MW0052-010.0-20130109	M505-MW0052-010.0-20131112	M505-MW0052-010.0-20140219	M505-MW0052-010.0-20140528	M505-MW0052-010.0-20140813	M505-MW0052-010.0-20141124	M505-MW0052-010.0-20150224	M505-MW0052-010.0-20150519	M505-MW0052-010.0-20150928	M505-MW0053-010.0-20130108	M505-MW0053-010.0-20140528	M505-MW0053-010.0-20150519	M505-MW0053-010.0-2015928	M505-MW0054-010.0-20111114	M505-MW0054-010.0-20120417	M505-MW0054-010.0-20120723	M505-MW0054-010.0-20121009	M505-MW0054-010.0-20130108	M505-MW0054-010.0-20130424	M505-MW0054-010.0-20140528
Volatile Organics (µg/l)																				
1,1-Dichloroethane	<0.30	<0.30	<0.30	<0.30	<0.30	<0.60	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.300	<0.300	<0.300	<0.300	<0.30	< 0.3	<0.30
1,1-Dichloroethene	<0.16	<0.16	<0.16	0.20 I	<0.16	<0.32	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.160	<0.160	<0.160	<0.160	<0.16	< 0.16	<0.16
Benzene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.42	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
cis-1,2-Dichloroethene	62.0	**170**	60	68	28	22	6.2	19	4	9.0	11.0	6.3	<0.36	0.640 I	45.50	5.4	1.51	1.9	0.94 I	1.2
Ethylbenzene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.42	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	<0.21
Tetrachloroethene	<0.22	<0.22	<0.22	<0.22	<0.22	<0.44	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	0.33 I	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	<0.22
Toluene	<0.19	<0.19	<0.19	<0.19	<0.19	<0.38	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	0.600 I	<0.190	<0.190	<0.190	<0.19	< 0.19	<0.19
trans-1,2-Dichloroethene	1.40	2.8	2.6	1.6	1.3	0.7 I	0.20 I	0.51 I	0.21 I	<0.19	<0.19	<0.19	<0.19	<0.190	0.920 I	0.920 I	<0.190	<0.19	< 0.19	<0.19
Trichloroethene	<0.36	1.2	<0.36	0.60 I	<0.36	<0.72	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Vinyl Chloride	**61**	**17**	**3.7**	**5.8**	**3.1**	**2.2**	<0.36	**1.5**	<0.36	<0.36	<0.36	<0.36	<0.36	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	<0.36
Xylenes (Total)	<0.31	<0.31	<0.31	<0.31	<0.31	<0.62	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.310	<0.310	<0.310	<0.310	<0.31	< 0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	M505-MW0055-025.0													
	MW0055IS (22.5-27.5)													
	11/14/11	4/17/12	7/23/12	10/9/12	1/8/13	4/24/13	11/12/13	2/19/14	5/28/14	8/13/14	11/24/14	2/24/15	5/19/15	9/28/15
	M505-MW0055-025.0-20111114	M505-MW0055-025.0-20120417	M505-MW0055-025.0-20120723	M505-MW0055-025.0-20121009	M505-MW0055-025.0-20130108	M505-MW0055-025.0-20130424	M505-MW0055-025.0-20131112	M505-MW0055-025.0-20140219	M505-MW0055-025.0-20140528	M505-MW0055-025.0-20140813	M505-MW0055-025.0-20141124	M505-MW0055-025.0-20150224	M505-MW0055-025.0-20150519	M505-MW0055-025.0-20150928
Volatile Organics (µg/l)														
1,1-Dichloroethane	<0.300	<0.300	<0.300	<0.300	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	0.890 I	<0.160	<0.160	<0.160	<0.16	< 0.16	< 0.16	< 0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	**1130**	**171**	**137**	1.42	2.2	0.83 I	<0.36	0.90 I	1.0	0.46 I	<0.36	<0.36	<0.36	<0.36
Ethylbenzene	<0.210	<0.210	<0.210	<0.210	<0.21	< 0.21	< 0.21	< 0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	<0.220	<0.220	<0.220	<0.220	<0.22	< 0.22	< 0.22	< 0.22	<0.22	<0.22	<0.22	0.28 IV	<0.22	0.32 I
Toluene	0.880 I	0.290 I	0.23 I	<0.190	0.21 I	< 0.19	< 0.19	< 0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	5.62	4.25	5.13	0.400 I	<0.19	< 0.19	< 0.19	< 0.19	0.20 I	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethene	<0.360	<0.360	<0.360	<0.360	<0.36	< 0.36	< 0.36	< 0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	**39.1**	**509.0**	**336**	**19.5**	0.39 I	**6.4**	**2.0**	**5.3**	**3.0**	0.46 I	0.41 I	0.41 I	<0.36	<0.36
Xylenes (Total)	0.150 I	<0.310	<0.310	<0.310	<0.31	< 0.31	< 0.31	< 0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Table 4-5
Summary of Groundwater Analytical Results for Monitoring Well Samples
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Constituent and GCTL*	M505-MW0056-010.0			M505-MW0057-025.0				M505-MW0058-010.0			M505-MW0059-025.0			
	MW0056S (5.0-15.0)			MW0057IS (22.5-27.5)				MW0058S (5.0-15.0)			MW0059IS (22.5-27.5)			
	1/7/13	5/27/14	5/20/15	1/7/13	5/27/14	5/20/15	9/29/15	1/7/13	5/27/14	5/19/15	1/7/13	5/27/14	5/19/15	9/29/15
	M505-MW0056-010.0-20130107	M505-MW0056-010.0-20140527	M505-MW0056-010.0-20150520	M505-MW0057-025.0-20130107	M505-MW0057-025.0-20140527	M505-MW0057-025.0-20150520	M505-MW0057-025.0-20150929	M505-MW0058-010.0-20130107	M505-MW0058-010.0-20140527	M505-MW0058-010.0-20150519	M505-MW0059-025.0-20130107	M505-MW0059-025.0-20140527	M505-MW0059-025.0-20150519	M505-MW0059-025.0-20150929
Volatile Organics (µg/l)														
1,1-Dichloroethane	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30	<0.30
1,1-Dichloroethene	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16	<0.16
Benzene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
cis-1,2-Dichloroethene	<0.36	<0.36	<0.36	0.38 I	<0.36	<0.36	<0.36	2.2	1.0	0.80 I	<0.36	<0.36	<0.36	<0.36
Ethylbenzene	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21	<0.21
Tetrachloroethene	<0.22	0.28 I	<0.22	<0.22	<0.22	0.24 I	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22	<0.22
Toluene	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	0.21 I	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
trans-1,2-Dichloroethene	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19	<0.19
Trichloroethene	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36	<0.36
Vinyl Chloride	<0.36	<0.36	<0.36	**85**	**65**	**58**	**65**	0.39 I	<0.36	<0.36	**2.4**	**15**	**22**	**27**
Xylenes (Total)	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31	<0.31

Notes:
Only chemicals of concern (COCs) are presented for data from 2010 to present.

* Florida Groundwater Cleanup Target Levels (GCTLs), Contaminant Cleanup Target Levels Rule, Chapter 62-777, FAC.

APMR = Annual Performance Monitoring Report

M505 = Building M7-505 Waste Treatment Tank

µg/l = micrograms per liter

bold text = values exceed GCTL

< = not detected above the method detection limit

J = concentration for analyte is estimated and between the method detection limit and laboratory quantitation limit.

I = reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.

Table 4-6
COC Reduction Evaluation
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Monitoring Well	November 2011 Baseline Sampling			May 2014 Sampling			May/September 2015 Sampling			Percent Reduction		
	TCE (µg/L)	cDCE (µg/L)	Vinyl Chloride (µg/L)	TCE (µg/L)	cDCE (µg/L)	Vinyl Chloride (µg/L)	TCE (µg/L)	cDCE (µg/L)	Vinyl Chloride (µg/L)	TCE	cDCE	Vinyl Chloride
MW0019-025.0	0.36 U	319	0.36 U	0.36 U	25	0.36 U	0.36 U	22	0.36 U	-	93.1	-
MW0020-036.0	0.36 U	728	0.36 U	0.36 U	1.5	0.36 U	0.36 U	120	0.42 I	-	83.5	-
MW0023-025.0	94.9	835	41.9	0.36 U	1.4	0.36 U	0.36 U	3.8	0.36 U	99.6	99.5	99.1
MW0025-025.0	0.36 U	1580	0.89 I	0.36 U	250	0.41 I	0.36 U	270	0.66 I	-	82.9	25.8
MW0032-035.0	0.36 U	320	123	0.36 U	170	9	0.36 U	220	35	-	31.3	71.5
MW0033-025.0	2.23	97.4	39.9	1.3	42	2.8	0.97 I	55	11	56.5	43.5	72.4
MW0035-025.0[1]	49.1	197	0.36 U	18	150	0.36 U	3.9	71	0.36 U	92.1	64.0	-
MW0038-025.0	0.36 U	165	0.36 U	0.36 U	17	0.36 U	0.36 U	3.5	0.36 U	-	97.9	-
MW0039 -032.5 [1]	54.6	164	0.57 I	3.2	21	0.36 U	6.1	5.3	0.36 U	88.8	96.8	-
MW0041-025.0 [1]	44.5	254	0.36 U	0.36 U	39	0.36 U	0.36 U	7.9	0.36 U	99.2	96.9	-
MW0042-035.0 [1]	21.2	227	0.36 U	4.3	57	0.36 U	7.9	31	0.36 U	62.7	86.3	-
MW0044-027.5	-	-	-	0.27 I	4.2	0.36 U	1.4	1.6	0.36 U	90.0	99.2	-
MW0045-034.5	0.36 U	189	0.36 U	0.36 U	61	0.36 U	0.36 U	36	0.36 U	-	81.0	-
MW0048-027.5	0.36 U	1270	5.53	0.36 U	17	0.36 U	0.36 U	41	0.40 I	-	96.8	92.8
MW0049-027.5	-	- -	-	11	240	0.36 U	0.39 I	140	0.36 U	99.0	36.4	-
MW0051-025.0	13.5	319	72.5	6.1	46	20	2.2	25	8.3	83.7	92.2	88.6
MW0052-010.0	-	-	-	0.36 U	68	5.8	0.36 U	3.8	0.36 U	-	-	99.4
MW0055-025.0	0.36 U	1130	39.1	0.36 U	1.0	3.0 I	0.36 U	0.4 U	0.36 U	-	100.0	99.1
Average	18.9	519.6	21.7	2.7	67.3	2.5	1.5	58.7	3.3			

	TCE	cis-1,2-DCE	Vinyl Chloride
Average Reduction	92.1%	88.7%	84.6%

Below GCTL
Above GCTL but below NADC
Above NADC

[1] Actual date of sampling for this well was May 2011

Table 4-7
Summary of Water Level Elevations
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

KSC RIS Well Designation	Measuring Point Elevation (1) (feet NAVD)	1/4/2012		4/18/2012		7/25/2012		10/8/2012		1/7/2013	
		Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)
M505-MW0001-020.0	9.27	6.86	2.41	7.15	2.12	6.19	3.08	6.15	3.12	NM	--
M505-MW0002-009.0	9.33	NM	--	NM	--	NM	--	5.59	3.74	NM	--
M505-MW0003S-009.0	9.64	6.11	3.53	7.68	1.96	5.95	3.69	6.03	3.61	7.09	2.55
M505-MW0004-009.0	8.69	5.92	2.77	7.18	1.51	5.37	3.32	5.38	3.31	6.31	2.38
M505-MW0005S-009.0	9.23	6.90	2.33	7.10	2.13	6.57	2.66	6.42	2.81	7.63	1.60
M505-MW0006S-009.0	9.41	5.55	3.86	Artesian	--	5.65	3.76	5.54	3.87	7.34	2.07
M505-MW0007S-009.0	9.15	6.11	3.04	7.06	2.09	5.03	4.12	5.14	4.01	6.43	2.72
M505-MW0007D-047.5	9.13	6.66	2.47	NM	--	NM	--	6.16	2.97	7.16	1.97
M505-MW0008S-009.0	9.11	6.60	2.51	7.27	1.84	5.95	3.16	5.90	3.21	6.96	2.15
M505-MW0009S-010.0	9.37	6.94	2.43	6.90	2.47	6.70	2.67	6.46	2.91	7.67	1.70
M505-MW0011-010.0	9.44	NM	--	8.32	1.12	5.65	3.79	5.68	3.76	7.28	2.16
M505-MW0014-009.0	9.21	6.95	2.26	6.99	2.22	NM	--	NM	--	7.51	1.70
M505-MW0003I-030.0	9.60	7.28	2.32	8.09	1.51	6.74	2.86	6.69	2.91	7.72	1.88
M505-MW0005I-030.0	9.17	6.89	2.28	7.04	2.13	6.54	2.63	6.39	2.78	7.71	1.46
M505-MW0006I-030.0	9.44	7.16	2.28	Artesian	--	7.29	2.15	6.98	2.46	7.23	2.21
M505-MW0007I-030.0	9.19	6.76	2.43	7.19	2.00	6.22	2.97	6.12	3.07	7.28	1.91
M505-MW0008I-030.0	9.22	6.69	2.53	7.37	1.85	6.09	3.13	6.01	3.21	7.07	2.15
M505-MW0009IS-025.5	9.35	6.96	2.39	6.86	2.49	6.65	2.70	6.50	2.85	7.72	1.63
M505-MW0010-025.5	9.27	6.83	2.44	7.29	1.98	6.31	2.96	6.20	3.07	7.56	1.71
M505-MW0012-025.5	8.89	6.43	2.46	6.71	2.18	5.90	2.99	5.82	3.07	6.98	1.91
M505-MW0013-025.5	9.52	NM	--	7.57	1.95	6.41	3.11	NM	--	7.52	2.00
M505-MW0015-025.0	9.08	6.73	2.35	7.29	1.79	6.34	2.74	6.29	2.79	7.27	1.81
M505-MW0016-036.0	8.91	6.56	2.35	7.14	1.77	6.18	2.73	6.28	2.63	7.20	1.71
M505-MW0017-025.0	9.30	7.02	2.28	7.75	1.55	6.64	2.66	6.50	2.80	7.80	1.50
M505-MW0018-036.0	9.20	6.90	2.30	7.66	1.54	6.57	2.63	6.42	2.78	7.73	1.47
M505-MW0019-025.0	9.28	6.94	2.34	8.65	0.63	6.98	2.30	6.50	2.78	7.79	1.49
M505-MW0020-036.0	9.07	6.75	2.32	8.43	0.64	6.73	2.34	6.25	2.82	7.52	1.55
M505-MW0021-025.0	6.04	3.79	2.25	3.70	2.34	3.49	2.55	3.29	2.75	4.89	1.15
M505-MW0022-025.0	9.45	7.13	2.32	8.25	1.20	7.29	2.16	6.71	2.74	8.01	1.44
M505-MW0023-025.0	8.83	6.55	2.28	7.93	0.90	6.10	2.73	6.00	2.83	7.19	1.64
M505-MW0024-035.0	8.80	6.52	2.28	7.88	0.92	6.13	2.67	6.30	2.50	7.15	1.65
M505-MW0025-025.0	10.70	5.46	5.24	9.32	1.38	8.08	2.62	7.94	2.76	9.11	1.59
M505-MW0026-035.0	10.71	5.47	5.24	9.34	1.37	8.10	2.61	7.95	2.76	9.15	1.56
M505-MW0027-025.0	9.70	7.40	2.30	6.34	3.36	7.26	2.44	7.00	2.70	7.76	1.94
M505-MW0028-025.0	5.66	3.52	2.14	3.53	2.13	3.19	2.47	3.01	2.65	4.48	1.18
M505-MW0029-025.0	6.88	5.02	1.86	6.18	0.70	4.56	2.32	NM	--	5.35	1.53
M505-MW0030-025.0	10.13	8.01	2.12	8.74	1.39	7.62	2.51	7.49	2.64	8.60	1.53
M505-MW0031-025.0	10.37	8.35	2.02	9.44	0.93	7.95	2.42	7.86	2.51	8.88	1.49
M505-MW0032-035.0	10.82	8.41	2.41	6.07	4.75	8.31	2.51	8.23	2.59	9.25	1.57
M505-MW0033-025.0	10.67	8.54	2.13	9.95	0.72	8.13	2.54	8.03	2.64	9.06	1.61
M505-MW0034-025.0	10.31	8.18	2.13	9.23	1.08	7.76	2.55	7.69	2.62	8.77	1.54
M505-MW0035-025.0	6.85	4.63	2.22	5.50	1.35	4.19	2.66	4.09	2.76	5.21	1.64
M505-MW0036-035.0	6.40	4.12	2.28	4.92	1.48	3.73	2.67	3.69	2.71	4.76	1.64
M505-MW0037-010.0	9.47	NM	--	NM	--	NM	--	NM	--	7.17	2.30
M505-MW0038-025.0	8.95	6.54	2.41	8.14	0.81	6.58	2.37	6.08	2.87	7.45	1.50
M505-MW0039-032.5	8.49	6.04	2.45	6.59	1.90	5.43	3.06	5.38	3.11	6.61	1.88
M505-MW0040-022.5	8.86	6.42	2.44	6.95	1.91	5.81	3.05	5.75	3.11	7.00	1.86
M505-MW0041-025.0	9.10	6.76	2.34	7.43	1.67	6.29	2.81	6.25	2.85	7.32	1.78
M505-MW0042-035.0	9.14	6.83	2.31	7.46	1.68	6.33	2.81	6.26	2.88	7.57	1.57
M505-MW0043-027.5	9.08	6.73	2.35	6.99	2.09	NM	--	6.13	2.95	7.54	1.54
M505-MW0044-027.5	8.21	5.82	2.39	6.48	1.73	5.32	2.89	5.27	2.94	6.52	1.69
M505-MW0045-034.5	9.03	6.66	2.37	8.28	0.75	6.63	2.40	6.15	2.88	7.54	1.49
M505-MW0046-010.0	9.03	6.61	2.42	8.29	0.74	6.65	2.38	6.17	2.86	7.57	1.46
M505-MW0047-027.5	9.34	7.06	2.28	8.11	1.23	7.12	2.22	6.55	2.79	7.95	1.39
M505-MW0048-027.5	9.06	6.77	2.29	7.29	1.77	6.75	2.31	6.30	2.76	7.70	1.36
M505-MW0049-027.5	11.03	8.87	2.16	9.81	1.22	8.43	2.60	8.34	2.69	9.39	1.64
M505-MW0050-010.0	10.85	8.68	2.17	9.55	1.30	8.29	2.56	8.20	2.65	9.31	1.54
M505-MW0051-025.0	9.63	7.57	2.06	8.96	0.67	7.14	2.49	7.03	2.60	8.01	1.62
M505-MW0052-010.0	9.88	7.91	1.97	9.04	0.84	7.44	2.44	7.39	2.49	8.29	1.59
M505-MW0053-010.0	8.55	6.56	1.99	7.63	0.92	6.13	2.42	5.97	2.58	7.00	1.55
M505-MW0054-010.0	10.03	8.10	1.93	9.40	0.63	7.65	2.38	7.53	2.50	8.46	1.57
M505-MW0055-025.0	9.60	7.66	1.94	9.00	0.60	7.21	2.39	7.10	2.50	8.04	1.56
M505-MW0056-010.0	6.83	4.55	2.28	4.56	2.27	3.58	3.25	3.61	3.22	5.70	1.13
M505-MW0057-025.0	6.93	4.76	2.17	4.40	2.53	4.50	2.43	4.25	2.68	5.90	1.03
M505-MW0058-010.0	7.10	4.16	2.94	4.06	3.04	3.79	3.31	3.68	3.42	5.07	2.03
M505-MW0059-025.0	6.78	4.70	2.08	4.51	2.27	4.38	2.40	4.19	2.59	5.77	1.01

Table 4-7
Summary of Water Level Elevations
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

KSC RIS Well Designation	Measuring Point Elevation (1) (ft NAVD)	4/22/2013		9/12/2013		11/14/2013		2/20/2014		4/22/2014	
		Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)
M505-MW0001-020.0	9.27	6.62	2.65	NM	--	NM	--	NM	--	NM	--
M505-MW0002-009.0	9.33	6.20	3.13	NM	--	NM	--	NM	--	NM	--
M505-MW0003S-009.0	9.64	6.77	2.87	NM	--	NM	--	6.90	2.74	NM	--
M505-MW0004-009.0	8.69	5.36	3.33	NM	--	NM	--	NM	--	NM	--
M505-MW0005S-009.0	9.23	6.22	3.01	NM	--	NM	--	7.34	1.89	7.14	2.09
M505-MW0006S-009.0	9.41	7.26	2.15	NM	--	NM	--	6.19	3.22	NM	--
M505-MW0007S-009.0	9.15	5.10	4.05	NM	--	NM	--	7.23	1.92	5.13	4.02
M505-MW0007D-047.5	9.13	6.19	2.94	NM	--	NM	--	NM	--	NM	--
M505-MW0008S-009.0	9.11	6.50	2.61	NM	--	NM	--	NM	--	NM	--
M505-MW0009S-010.0	9.37	6.65	2.72	NM	--	NM	--	7.42	1.95	NM	--
M505-MW0011-010.0	9.44	6.29	3.15	NM	--	NM	--	6.69	2.75	NM	--
M505-MW0014-009.0	9.21	5.93	3.28	NM	--	NM	--	7.30	1.91	NM	--
M505-MW0003I-030.0	9.60	6.60	3.00	NM	--	NM	--	7.62	1.98	NM	--
M505-MW0005I-030.0	9.17	6.23	2.94	NM	--	NM	--	7.33	1.84	7.04	2.13
M505-MW0006I-030.0	9.44	7.07	2.37	NM	--	NM	--	7.58	1.86	NM	--
M505-MW0007I-030.0	9.19	6.30	2.89	NM	--	NM	--	7.15	2.04	5.31	3.88
M505-MW0008I-030.0	9.22	6.47	2.75	NM	--	NM	--	NM	--	NM	--
M505-MW0009IS-025.5	9.35	6.60	2.75	NM	--	NM	--	7.46	1.89	NM	--
M505-MW0010-025.5	9.27	6.36	2.91	NM	--	NM	--	7.25	2.02	NM	--
M505-MW0012-025.5	8.89	6.13	2.76	NM	--	NM	--	6.90	1.99	NM	--
M505-MW0013-025.5	9.52	6.64	2.88	7.22	2.30	7.22	2.30	7.57	1.95	5.26	4.26
M505-MW0015-025.0	9.08	6.15	2.93	NM	--	NM	--	6.99	2.09	NM	--
M505-MW0016-036.0	8.91	6.04	2.87	NM	--	NM	--	7.20	1.71	NM	--
M505-MW0017-025.0	9.30	6.23	3.07	NM	--	NM	--	7.42	1.88	4.89	4.41
M505-MW0018-036.0	9.20	6.16	3.04	NM	--	NM	--	7.32	1.88	3.03	6.17
M505-MW0019-025.0	9.28	6.34	2.94	7.18	2.10	7.18	2.10	7.54	1.74	NM	--
M505-MW0020-036.0	9.07	6.10	2.97	6.97	2.10	6.97	2.10	7.30	1.77	NM	--
M505-MW0021-025.0	6.04	3.05	2.99	NM	--	NM	--	4.15	1.89	NM	--
M505-MW0022-025.0	9.45	6.60	2.85	NM	--	NM	--	7.62	1.83	NM	--
M505-MW0023-025.0	8.83	5.75	3.08	6.64	2.19	6.64	2.19	7.12	1.71	2.32	6.51
M505-MW0024-035.0	8.80	5.79	3.01	6.65	2.15	6.65	2.15	7.07	1.73	NM	--
M505-MW0025-025.0	10.70	7.35	3.35	8.60	2.10	8.60	2.10	8.87	1.83	NM	--
M505-MW0026-035.0	10.71	7.52	3.19	8.64	2.07	8.64	2.07	8.90	1.81	NM	--
M505-MW0027-025.0	9.70	6.96	2.74	NM	--	NM	--	7.81	1.89	NM	--
M505-MW0028-025.0	5.66	2.45	3.21	NM	--	NM	--	3.82	1.84	NM	--
M505-MW0029-025.0	6.88	NM	--	NM	--	NM	--	NM	--	NM	--
M505-MW0030-025.0	10.13	6.72	3.41	NM	--	NM	--	NM	--	NM	--
M505-MW0031-025.0	10.37	7.22	3.15	NM	--	NM	--	8.52	1.85	NM	--
M505-MW0032-035.0	10.82	8.04	2.78	8.80	2.02	8.80	2.02	9.18	1.64	NM	--
M505-MW0033-025.0	10.67	7.35	3.32	8.68	1.99	8.68	1.99	9.01	1.66	7.53	3.14
M505-MW0034-025.0	10.31	7.08	3.23	NM	--	NM	--	NM	--	NM	--
M505-MW0035-025.0	6.85	7.66	-0.81	4.73	2.12	4.73	2.12	5.01	1.84	4.22	2.63
M505-MW0036-035.0	6.40	3.33	3.07	4.81	1.59	4.81	1.59	4.55	1.85	NM	--
M505-MW0037-010.0	9.47	6.17	3.30	NM	--	NM	--	7.45	2.02	NM	--
M505-MW0038-025.0	8.95	6.04	2.91	6.80	2.15	6.80	2.15	7.16	1.79	5.30	3.65
M505-MW0039-032.5	8.49	5.56	2.93	6.21	2.28	6.21	2.28	6.56	1.93	NM	--
M505-MW0040-022.5	8.86	5.92	2.94	6.60	2.26	6.60	2.26	6.92	1.94	4.34	4.52
M505-MW0041-025.0	9.10	6.19	2.91	6.90	2.20	6.90	2.20	7.46	1.64	4.72	4.38
M505-MW0042-035.0	9.14	6.14	3.00	6.97	2.17	6.97	2.17	7.46	1.68	4.82	4.32
M505-MW0043-027.5	9.08	6.31	2.77	NM	--	NM	--	NM	--	NM	--
M505-MW0044-027.5	8.21	5.28	2.93	6.04	2.17	6.04	2.17	6.30	1.91	NM	--
M505-MW0045-034.5	9.03	6.18	2.85	6.88	2.15	6.88	2.15	7.18	1.85	5.28	3.75
M505-MW0046-010.0	9.03	6.19	2.84	6.88	2.15	6.88	2.15	7.21	1.82	4.07	4.96
M505-MW0047-027.5	9.34	6.58	2.76	NM	--	NM	--	7.52	1.82	NM	--
M505-MW0048-027.5	9.06	6.09	2.97	6.95	2.11	6.95	2.11	7.32	1.74	4.18	4.88
M505-MW0049-027.5	11.03	7.80	3.23	8.96	2.07	8.96	2.07	9.24	1.79	8.23	2.80
M505-MW0050-010.0	10.85	7.52	3.33	NM	--	NM	--	9.15	1.70	NM	--
M505-MW0051-025.0	9.63	6.25	3.38	7.70	1.93	7.70	1.93	7.83	1.80	6.72	2.91
M505-MW0052-010.0	9.88	6.63	3.25	8.05	1.83	8.05	1.83	8.14	1.74	NM	--
M505-MW0053-010.0	8.55	5.14	3.41	NM	--	NM	--	6.85	1.70	2.93	5.62
M505-MW0054-010.0	10.03	6.82	3.21	NM	--	NM	--	8.33	1.70	6.96	3.07
M505-MW0055-025.0	9.60	6.39	3.21	7.79	1.81	7.79	1.81	7.94	1.66	7.23	2.37
M505-MW0056-010.0	6.83	3.50	3.33	NM	--	NM	--	4.82	2.01	NM	--
M505-MW0057-025.0	6.93	3.95	2.98	NM	--	NM	--	5.11	1.82	NM	--
M505-MW0058-010.0	7.10	3.91	3.19	NM	--	NM	--	3.95	3.15	NM	--
M505-MW0059-025.0	6.78	3.71	3.07	NM	--	NM	--	5.03	1.75	NM	--

Table 4-7
Summary of Water Level Elevations
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

KSC RIS Well Designation	Measuring Point Elevation (1) (ft NAVD)	5/27/2014		8/13/2014		11/24/2015		2/23/2015		5/18/2015	
		Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)	Depth to Water (feet)	Water-Level Elevation (feet NAVD)
M505-MW0001-020.0	9.27	7.24	2.03	NM	--	NM	--	6.00	3.27	7.70	1.57
M505-MW0002-009.0	9.33	6.43	2.90	NM	--	NM	--	NM	--	NM	--
M505-MW0003S-009.0	9.64	6.99	2.65	NM	--	NM	--	5.98	3.66	7.16	2.48
M505-MW0004-009.0	8.69	6.41	2.28	NM	--	NM	--	NM	--	NM	--
M505-MW0005S-009.0	9.23	7.89	1.34	NM	--	NM	--	5.84	3.39	7.42	1.81
M505-MW0006S-009.0	9.41	6.04	3.37	NM	--	NM	--	NM	--	NM	--
M505-MW0007S-009.0	9.15	6.40	2.75	NM	--	NM	--	5.30	3.85	6.21	2.94
M505-MW0007D-047.5	9.13	7.51	1.62	NM	--	NM	--	NM	--	NM	--
M505-MW0008S-009.0	9.11	7.16	1.95	NM	--	NM	--	NM	--	7.58	1.53
M505-MW0009S-010.0	9.37	7.86	1.51	NM	--	NM	--	5.59	3.78	7.55	1.82
M505-MW0011-010.0	9.44	6.93	2.51	NM	--	NM	--	5.41	4.03	5.41	4.03
M505-MW0014-009.0	9.21	7.71	1.50	NM	--	NM	--	5.86	3.35	7.39	1.82
M505-MW0003I-030.0	9.60	8.07	1.53	NM	--	NM	--	6.45	3.15	7.91	1.69
M505-MW0005I-030.0	9.17	7.88	1.29	NM	--	NM	--	5.86	3.31	7.45	1.72
M505-MW0006I-030.0	9.44	7.76	1.68	NM	--	NM	--	NM	--	NM	--
M505-MW0007I-030.0	9.19	7.64	1.55	NM	--	NM	--	5.84	3.35	7.38	1.81
M505-MW0008I-030.0	9.22	7.23	1.99	NM	--	NM	--	NM	--	7.66	1.56
M505-MW0009IS-025.5	9.35	7.90	1.45	NM	--	NM	--	5.95	1.95	7.49	1.86
M505-MW0010-025.5	9.27	7.72	1.55	NM	--	NM	--	5.91	3.36	7.45	1.82
M505-MW0012-025.5	8.89	7.16	1.73	NM	--	NM	--	5.56	3.33	7.13	1.76
M505-MW0013-025.5	9.52	7.81	1.71	6.40	3.12	6.39	3.13	6.25	3.27	7.80	1.72
M505-MW0015-025.0	9.08	7.78	1.30	NM	--	NM	--	NM	--	7.34	1.74
M505-MW0016-036.0	8.91	7.71	1.20	NM	--	NM	--	NM	--	7.11	1.80
M505-MW0017-025.0	9.30	7.95	1.35	NM	--	NM	--	NM	--	7.58	1.72
M505-MW0018-036.0	9.20	7.89	1.31	NM	--	NM	--	NM	--	7.49	1.71
M505-MW0019-025.0	9.28	8.02	1.26	6.40	2.88	NM	--	5.98	3.30	7.56	1.72
M505-MW0020-036.0	9.07	7.81	1.26	6.20	2.87	NM	--	5.77	3.30	7.30	1.77
M505-MW0021-025.0	6.04	4.60	1.44	NM	--	NM	--	2.68	3.36	4.27	1.77
M505-MW0022-025.0	9.45	7.99	1.46	NM	--	NM	--	6.10	3.35	7.68	1.77
M505-MW0023-025.0	8.83	7.38	1.45	5.81	3.02	5.82	3.01	5.57	3.26	7.09	1.74
M505-MW0024-035.0	8.80	7.38	1.42	5.89	2.91	5.79	3.01	5.51	3.29	7.00	1.80
M505-MW0025-025.0	10.70	9.45	1.25	7.89	2.81	7.79	2.91	7.50	3.20	9.02	1.68
M505-MW0026-035.0	10.71	9.64	1.07	7.94	2.77	7.79	2.92	7.53	3.18	9.04	1.67
M505-MW0027-025.0	9.70	8.13	1.57	NM	--	NM	--	6.30	3.40	7.87	1.83
M505-MW0028-025.0	5.66	4.34	1.32	NM	--	NM	--	2.48	3.18	3.97	1.69
M505-MW0029-025.0	6.88	5.71	1.17	NM	--	NM	--	4.22	2.66	NM	--
M505-MW0030-025.0	10.13	8.86	1.27	NM	--	NM	--	7.02	3.11	8.50	1.63
M505-MW0031-025.0	10.37	9.04	1.33	NM	--	NM	--	NM	--	NM	--
M505-MW0032-035.0	10.82	9.62	1.20	8.14	2.68	7.98	2.84	7.78	3.04	9.38	1.44
M505-MW0033-025.0	10.67	9.44	1.23	7.95	2.72	7.88	2.79	7.67	3.00	9.13	1.54
M505-MW0034-025.0	10.31	8.97	1.34	NM	--	NM	--	7.35	2.96	8.71	1.60
M505-MW0035-025.0	6.85	5.60	1.25	3.92	2.93	3.97	2.88	3.72	3.13	5.21	1.64
M505-MW0036-035.0	6.40	5.16	1.24	3.62	2.78	3.49	2.91	3.26	3.14	4.70	1.70
M505-MW0037-010.0	9.47	6.96	2.51	NM	--	NM	--	5.92	3.55	6.90	2.57
M505-MW0038-025.0	8.95	7.60	1.35	5.98	2.97	NM	--	5.62	3.33	7.17	1.78
M505-MW0039-032.5	8.49	6.86	1.63	5.33	3.16	5.35	3.14	5.18	3.31	6.74	1.75
M505-MW0040-022.5	8.86	7.27	1.59	5.71	3.15	5.73	3.13	5.54	3.32	7.07	1.79
M505-MW0041-025.0	9.10	7.68	1.42	6.05	3.05	6.10	3.00	5.78	3.32	7.32	1.78
M505-MW0042-035.0	9.14	7.72	1.42	6.10	3.04	6.09	3.05	5.80	3.34	7.34	1.80
M505-MW0043-027.5	9.08	7.54	1.54	NM	--	NM	--	NM	--	NM	--
M505-MW0044-027.5	8.21	6.84	1.37	5.12	3.09	5.22	2.99	5.00	3.21	6.51	1.70
M505-MW0045-034.5	9.03	7.65	1.38	6.06	2.97	NM	--	5.70	3.33	7.21	1.82
M505-MW0046-010.0	9.03	7.68	1.35	6.08	2.95	NM	--	5.70	3.33	7.25	1.78
M505-MW0047-027.5	9.34	7.89	1.45	NM	--	NM	--	5.98	3.36	7.57	1.77
M505-MW0048-027.5	9.06	7.65	1.41	6.10	2.96	NM	--	5.80	3.26	7.34	1.72
M505-MW0049-027.5	11.03	9.79	1.24	8.25	2.78	8.21	2.82	7.97	3.06	9.44	1.59
M505-MW0050-010.0	10.85	9.63	1.22	NM	--	NM	--	7.78	3.07	9.02	1.83
M505-MW0051-025.0	9.63	8.43	1.20	6.89	2.74	6.86	2.77	6.66	2.97	8.03	1.60
M505-MW0052-010.0	9.88	8.75	1.13	7.09	2.79	7.03	2.85	6.88	3.00	8.22	1.66
M505-MW0053-010.0	8.55	7.36	1.19	NM	--	NM	--	5.67	2.88	7.02	1.53
M505-MW0054-010.0	10.03	8.89	1.14	NM	--	NM	--	7.24	2.79	8.55	1.48
M505-MW0055-025.0	9.60	8.46	1.14	7.30	2.30	6.94	2.66	6.83	2.77	8.13	1.47
M505-MW0056-010.0	6.83	4.84	1.99	NM	--	NM	--	3.24	3.59	4.45	2.38
M505-MW0057-025.0	6.93	5.55	1.38	NM	--	NM	--	3.71	3.22	5.21	1.72
M505-MW0058-010.0	7.10	4.19	2.91	NM	--	NM	--	2.94	4.16	3.73	3.37
M505-MW0059-025.0	6.78	5.45	1.33	NM	--	NM	--	3.62	3.16	5.14	1.64

Table 4-7
Summary of Water Level Elevations
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

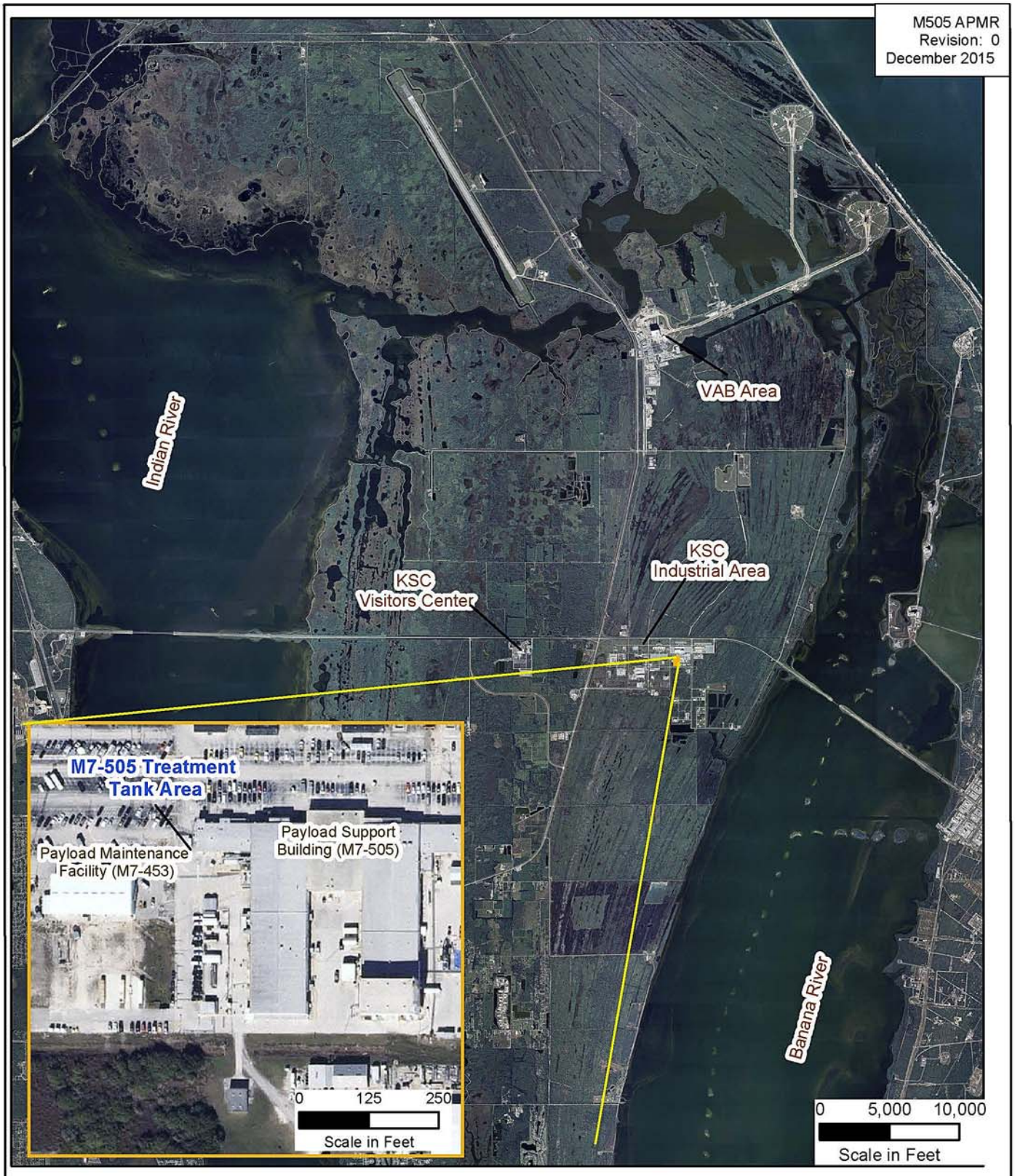
KSC RIS Well Designation	Measuring Point Elevation (1) (ft NAVD)	9/28/2015	
		Depth to Water (feet)	Water-Level Elevation (feet NAVD)
M505-MW0001-020.0	9.27	NM	--
M505-MW0002-009.0	9.33	NM	--
M505-MW0003S-009.0	9.64	NM	--
M505-MW0004-009.0	8.69	NM	--
M505-MW0005S-009.0	9.23	NM	--
M505-MW0006S-009.0	9.41	NM	--
M505-MW0007S-009.0	9.15	NM	--
M505-MW0007D-047.5	9.13	NM	--
M505-MW0008S-009.0	9.11	NM	--
M505-MW0009S-010.0	9.37	NM	--
M505-MW0011-010.0	9.44	NM	--
M505-MW0014-009.0	9.21	NM	--
M505-MW0003I-030.0	9.60	NM	--
M505-MW0005I-030.0	9.17	NM	--
M505-MW0006I-030.0	9.44	NM	--
M505-MW0007I-030.0	9.19	NM	--
M505-MW0008I-030.0	9.22	NM	--
M505-MW0009IS-025.5	9.35	NM	--
M505-MW0010-025.5	9.27	NM	--
M505-MW0012-025.5	8.89	NM	--
M505-MW0013-025.5	9.52	6.40	3.12
M505-MW0015-025.0	9.08	NM	--
M505-MW0016-036.0	8.91	NM	--
M505-MW0017-025.0	9.30	NM	--
M505-MW0018-036.0	9.20	5.89	3.31
M505-MW0019-025.0	9.28	NM	--
M505-MW0020-036.0	9.07	5.90	3.17
M505-MW0021-025.0	6.04	2.78	3.26
M505-MW0022-025.0	9.45	6.12	3.33
M505-MW0023-025.0	8.83	5.71	3.12
M505-MW0024-035.0	8.80	NM	--
M505-MW0025-025.0	10.70	7.62	3.08
M505-MW0026-035.0	10.71	NM	--
M505-MW0027-025.0	9.70	6.40	3.30
M505-MW0028-025.0	5.66	2.13	3.53
M505-MW0029-025.0	6.88	NM	--
M505-MW0030-025.0	10.13	6.98	3.15
M505-MW0031-025.0	10.37	NM	--
M505-MW0032-035.0	10.82	8.02	2.80
M505-MW0033-025.0	10.67	8.89	1.78
M505-MW0034-025.0	10.31	NM	--
M505-MW0035-025.0	6.85	3.90	2.95
M505-MW0036-035.0	6.40	NM	--
M505-MW0037-010.0	9.47	NM	--
M505-MW0038-025.0	8.95	5.80	3.15
M505-MW0039-032.5	8.49	5.34	3.15
M505-MW0040-022.5	8.86	NM	--
M505-MW0041-025.0	9.10	5.94	3.16
M505-MW0042-035.0	9.14	5.99	3.15
M505-MW0043-027.5	9.08	NM	--
M505-MW0044-027.5	8.21	5.11	3.10
M505-MW0045-034.5	9.03	NM	--
M505-MW0046-010.0	9.03	NM	--
M505-MW0047-027.5	9.34	NM	--
M505-MW0048-027.5	9.06	5.89	3.17
M505-MW0049-027.5	11.03	8.13	2.90
M505-MW0050-010.0	10.85	NM	--
M505-MW0051-025.0	9.63	6.88	2.75
M505-MW0052-010.0	9.88	7.07	2.81
M505-MW0053-010.0	8.55	5.88	2.67
M505-MW0054-010.0	10.03	NM	--
M505-MW0055-025.0	9.60	6.85	2.75
M505-MW0056-010.0	6.83	NM	--
M505-MW0057-025.0	6.93	3.74	3.19
M505-MW0058-010.0	7.10	NM	--
M505-MW0059-025.0	6.78	3.61	3.17

Notes:
-- = Not applicable
ft = Feet
APMR = Annual Performance Monitoring Report
NM = Not Measured
Elevation (1) = Surveyor referenced to the North American Vertical Datum of 1988 (NAVD), prior elevation surveys are adjusted.
KSC RIS = Kennedy Space Center Remediation Information System
M505 = Building M7-505 Waste Treatment Tank

Table 4-8
Post Remediation Monitoring Plan
Building M7-505 Treatment Tank
Kennedy Space Center, Florida

Monitoring Well	Trichloroethene	cis-1,2-Dichloroethene	Vinyl Chloride
MW0013IS-025.5	X		
MW0020-036.0		X	
MW0022-025.0			X
MW0025-025.0		X	
MW0028-025.0			X
MW0032.035.0		X	X
MW0033.025.0			X
MW0035.025.0	X	X	
MW0039.032.5	X		
MW0042.035.0	X		
MW0049.027.5		X	
MW0051.025.0			X
MW0057.025.0			X
MW0059.025.0			X

Notes:
APMR = Annual Performance Monitoring Report
M505 = Building M7-505 Treatment Tank



Legend

Area of Investigation

Notes:
APMR - Annual Performance Monitoring Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration

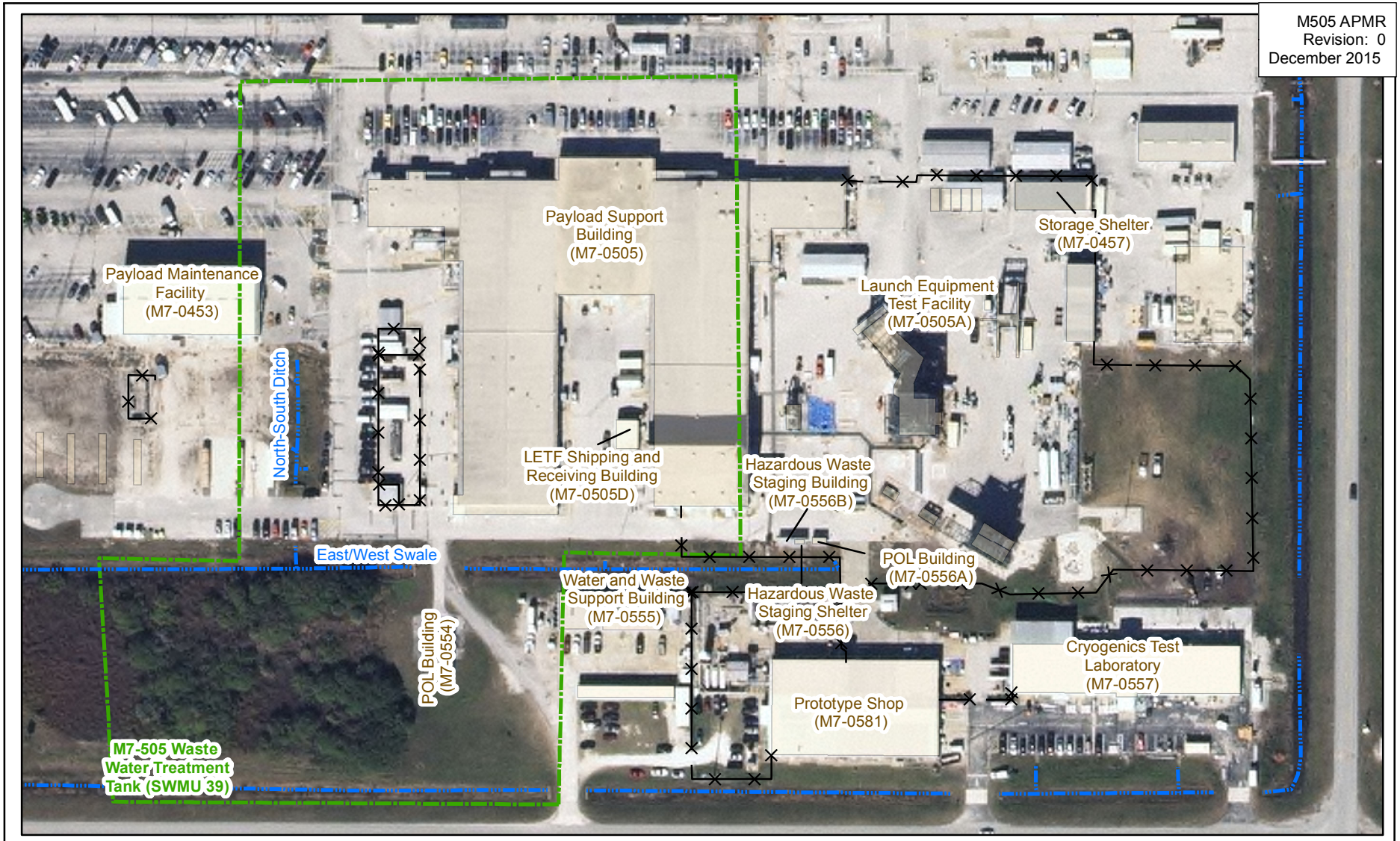
N

Site Location Map
Annual Performance Monitoring Report

Building M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number: TL014020.0003

Figure 1-1



Legend

- Drainage Swale
- Fence
- Treatment Tank SWMU 039 Area
- Structure

Notes:
APMR- Annual Performance Monitoring Report
KSC - Kennedy Space Center
NASA - National Aeronautics and Space Administration
SWMU - Solid Waste Management Unit

0 75 150
Scale in Feet

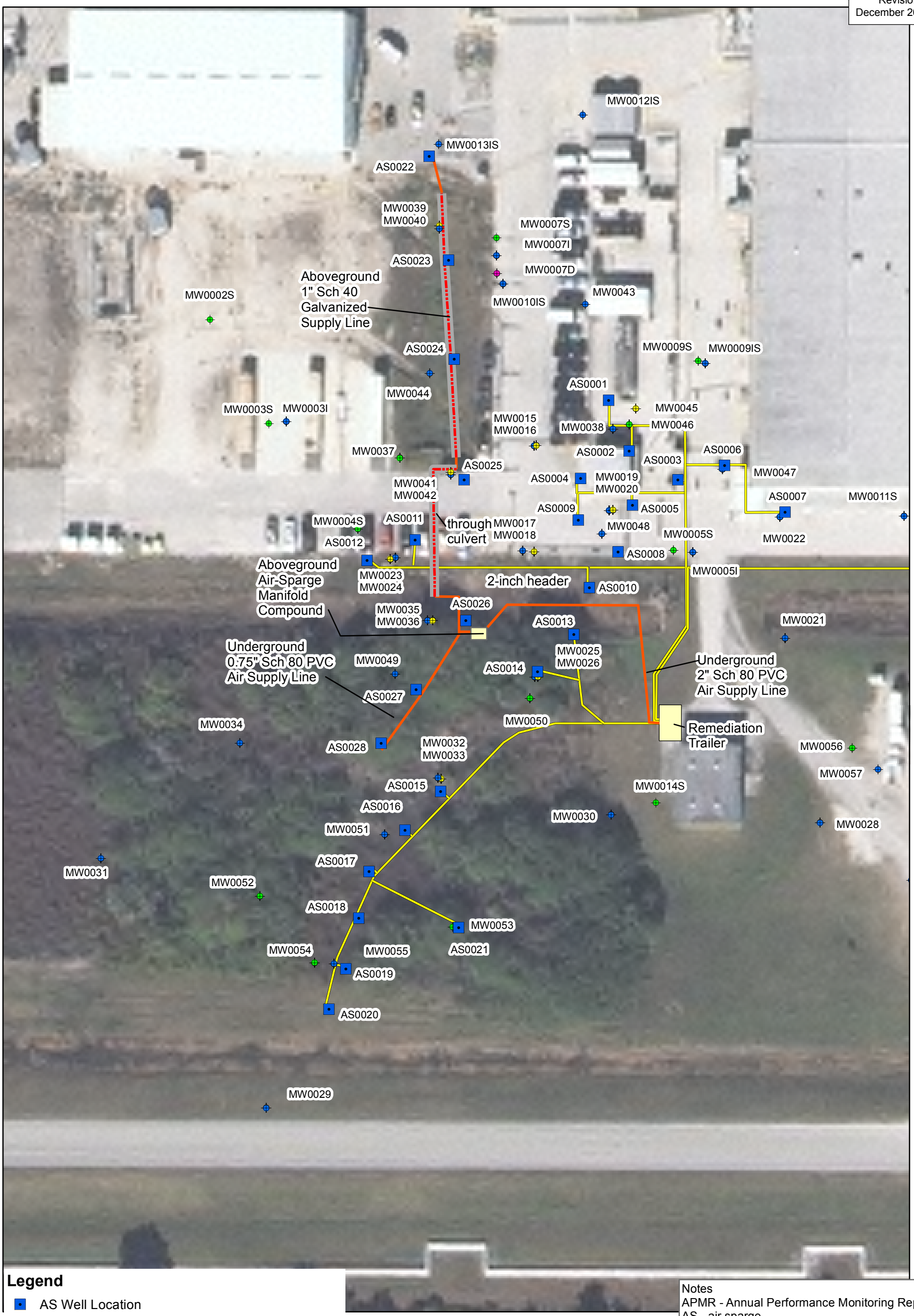
N

Site Plan
Annual Performance Monitoring Report

Building M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number: TL014020.0003

Figure 1-2



Legend

- AS Well Location
- Monitoring Well Screened above 15 ft bls
- Monitoring Well Screened between 15 and 35 ft bls
- Monitoring Well Screened between 30 and 40 ft bls
- Monitoring Well Screened below 40 ft bls
- 2013 Steel AS Piping
- 2013 Underground PVC AS Line
- Existing AS Line
- Remediation Trailer Location

0 25 50
Scale in Feet

N

Notes
APMR - Annual Performance Monitoring Report
AS - air sparge
ft bls - feet below land surface
MW - monitoring well
PVC - polyvinyl chloride

IAS Well Locations and Piping Network
Annual Performance Monitoring Report

Building M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number: TL014020.0003

Figure 2-1

M505 APMR
Revision: 0
December 2015

MW0012S
MW0012I
MW0013S
MW0013I
AS0022
MW0039
MW0040
MW0007S
MW0007I
AS0023
MW0007D
MW0010I
MW0010S
MW0043
MW0002S
AS0024
MW0044
MW0009S
MW0009I
AS0001
MW0045
MW0003S
MW0003I
AS0025
MW0038
MW0046
MW0015
MW0016
AS0002
AS0006
MW0037
MW0042
MW0047
MW0041
AS0004
AS0003
MW0020
AS0005
AS0009
MW0019
MW0022
AS0007
MW0027
MW0004
MW0048
MW0005S
MW0024
AS0011
MW0005I
AS0012
MW0017
MW0018
AS0008
MW0011S
AS0010
MW0035
AS0026
MW0036
AS0013
MW0021
MW0026
AS0014
MW0049
MW0025
AS0027
MW0050
AS0028
MW0056
MW0034
MW0033
MW0057
MW0032
MW0058
AS0015
MW0014
MW0030
AS0016
MW0028
MW0051
MW0031
AS0017
MW0059
MW0052
AS0018
MW0053
AS0021
MW0054
MW0055
AS0019
AS0020
MW0029
3RD ST SE

LEGEND

- Historical observed ROI; currently no observed air flow
- Estimated Area of Influence
- Monitoring Well Screened above 15 ft bls
- Monitoring Well Screened between 15 and 35 ft bls
- Monitoring Well Screened between 30 and 40 ft bls
- Monitoring Well Screened below 40 ft bls
- AS Recovery Well
- Remediation Trailer
- 2013 Underground Steel AS Piping
- 2013 Underground PVC AS Line
- Existing AS Line
- 2013 Aboveground Steel AS Piping

NOTES:

NASA - National Aeronautics and Space Administration
APMR - Annual Performance Monitoring Report

ROI - Radius of Influence
AS - Air Sparge
ft bls - feet below land surface

0 30 60 90 120
SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

Area of Influence - September 2015 Annual Performance Monitoring Report

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number:TL014020

Figure 4-1

CITY:(KNOXVILLE) DIV/GROUP:(ENVSCI) LD:(BALTOM) PIC:() PM:(SSTARR) TM:(SSTARR)
PROJECT:(TL014020.000.02.GIS.KSC) CK:() XREFS:() PLOTSTYLE:(FIXED.CTB) PLOTTED:(2/10/2016 12:15 PM BY SSTARR)
SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

M505 APMR
Revision: 0
December 2015



LEGEND

- IAS Well
- Monitoring Well Screened above 15 ft bls
- Monitoring Well Screened between 15 and 35 ft bls
- Monitoring Well Screened between 30 and 40 ft bls
- Monitoring Well Screened below 40 ft bls

NOTES:
1) ALL concentrations are shown in micrograms per liter (µg/L).
2) Screen interval shown in feet below land surface (ft bls).
3) **BOLD** indicates exceedance of GCTL.
4) **BOLD** indicates exceedance of NADC.

SCREENING CRITERIA		
Analyte	GCTL	NADC
cDCE	70	700
TCE	3	300
VC	1	100

cDCE - cis-1,2-dichloroethene
TCE - trichloroethene
VC - vinyl chloride

GCTL - Groundwater Cleanup Target Level
NADC - Natural Attenuation Default Concentration
APMR - Annual Performance Monitoring Report

I - detected between PQL and MDL, estimated
G - exceeds GCTL
N - exceeds NADC
U - not detected; MDL shown
ND - BSC - COCs below MDL

BSC - COCs below screening criteria
COCs - constituents of concern
MDL - method detection limit
PQL - practical quantitation limit
IAS - In-Situ Air Sparge

0 50 100 150 200
SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

M505 Groundwater Sampling Results Annual Performance Monitoring Report

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number:TL014020.0001

Figure 4-2

CITY:(KNOXVILLE) DIV/GROUP:(ENV/GIS) LD:(BLALTOM) PIC:( ) PM:(S.STARR) TM:(S.STARR)
PROJECT: TL014020 PATH: G:\GIS\NASA\FL_KENNEDYSPACECENTER\MAPDOCS\2015\12 APMR\F4-2 M505_APMR1512 MWRESULTS SUMMARY DS(ZE.MXD USER: BALTOM
SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

M505 APMR
Revision: 0
December 2015

TCE AREA
1,734 ft²

TCE AREA
2,651 ft²

cDCE AREA
6,279 ft²

VC AREA
2,148 ft²

cDCE AREA
834 ft²

VC AREA
18,425 ft²

MW0012S
MW0012I
MW0013S
MW0013I
AS0022
MW0039
MW0040
MW0007S
MW0007I
AS0023
MW0007D
MW0010I
MW0010S
MW0043
MW0002S
AS0024
MW0044
MW0009S
MW0009I
AS0001
MW0045
MW0046
MW0003S
MW0003I
AS0025
MW0038
MW0015
MW0016
AS0002
MW0006S
MW0006I
MW0037
MW0042
MW0041
AS0004
AS0003
AS0006
MW0047
MW0020
AS0005
AS0009
MW0019
MW0022
AS0007
MW0027
MW0004
AS0011
MW0048
MW0005S
MW0005I
MW0024
AS0012
MW0017
MW0018
AS0008
MW0011S
AS0010
MW0035
AS0026
MW0036
AS0013
MW0021
MW0026
AS0014
MW0049
MW0025
AS0027
MW0050
AS0028
MW0056
MW0034
MW0033
MW0057
MW0032
AS0015
MW0058
MW0014
MW0030
AS0016
MW0028
MW0051
MW0031
AS0017
MW0059
MW0052
AS0018
MW0053
AS0021
MW0054
MW0055
AS0019
AS0020
MW0029
3RD ST SE

LEGEND

- IAS Well
- Monitoring Well Screened above 15 ft bls
- Monitoring Well Screened between 15 and 35 ft bls
- Monitoring Well Screened between 30 and 40 ft bls
- Monitoring Well Screened below 40 ft bls
- Historical observed ROI; currently no observed air flow
- Estimated Area of Influence
- Trichloroethene >GCTL
- cis-1,2-Dichloroethene >GCTL
- Vinyl Chloride >GCTL

NOTES:
1) AS008 is not operational.
2) There was no observed air flow at AS0024, AS0025, AS0004, AS0005, AS0013, and AS0014.
3) * - April 2013 data used due to well inaccessibility.

NASA - National Aeronautics and Space Administration
APMR - Annual Performance Monitoring Report
GCTL - Groundwater Cleanup Target Level

AOI - Area of Influence
ROI - Radius of Influence
IAS - In-Situ Air Sparge
ft bls - feet below land surface
ft² - square feet

VOCs - Volatile Organic Compounds
TCE - Trichloroethene
cDCE - cis-1,2-Dichloroethene
VC - Vinyl Chloride

0 30 60 90 120
SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

Area of Affected Groundwater - May 2015
Annual Performance Monitoring Report

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

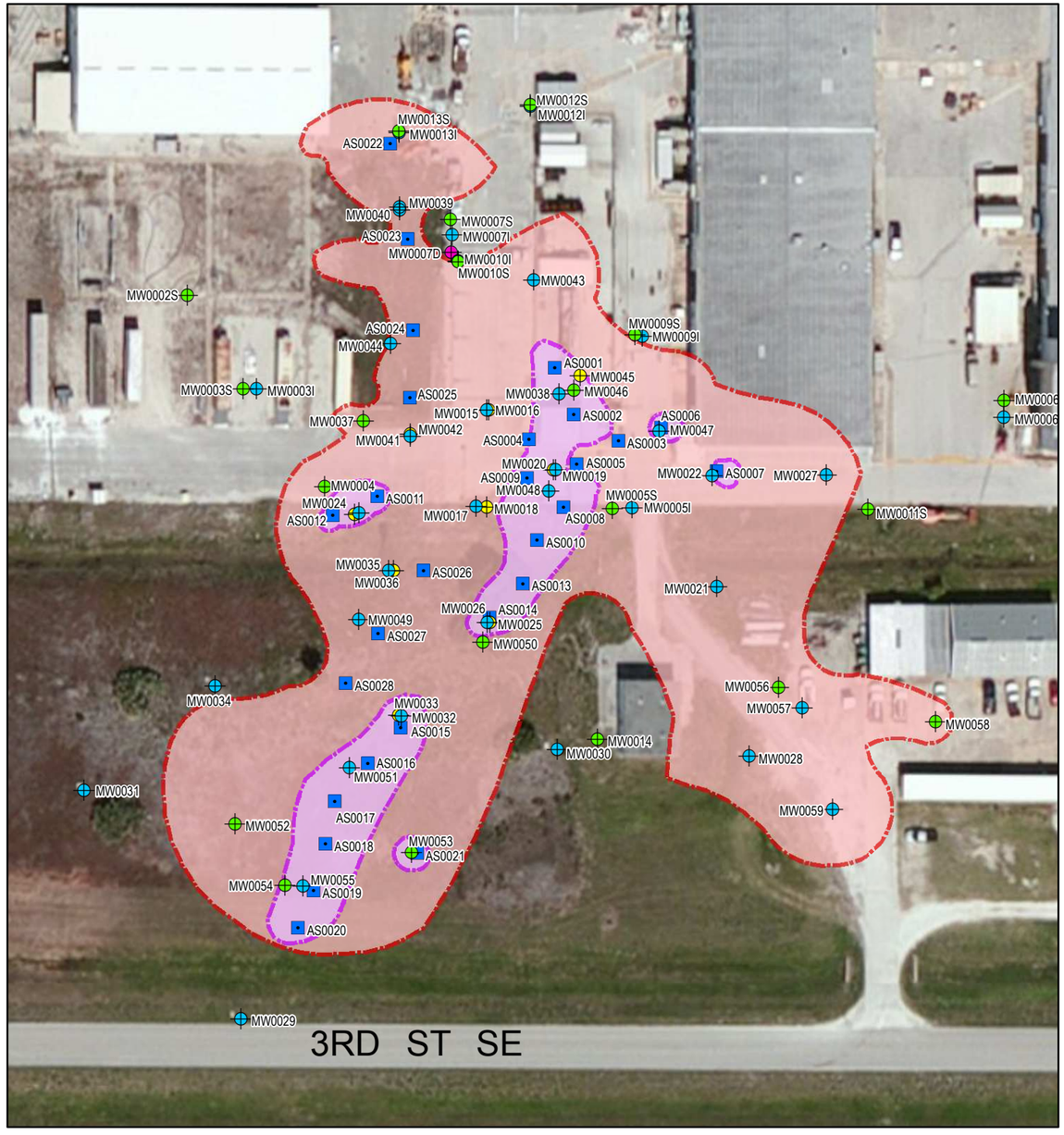
Project Number:TL014020

Figure 4-3

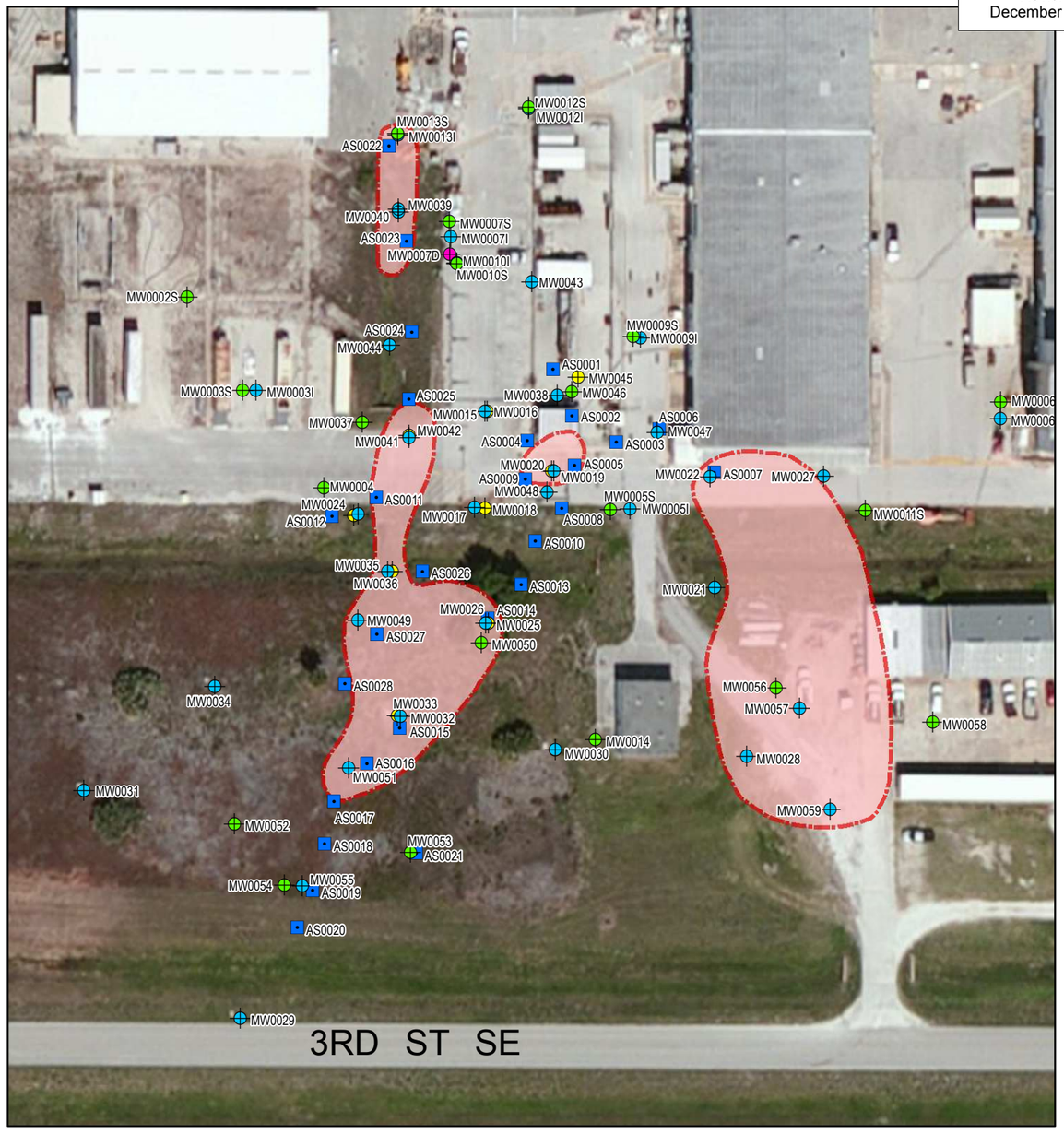
CTY:(KNOXVILLE) DIV/GROUP:(ENV/CIS) LD:(BALTOM) PIC:() PM:(S STARR) TM:(S STARR)
PRO:(C:\TL\2014\TL014020_M505_APMR\MXD\FIGURE 4-3 APMR1512 GW AREAAFFECTED.MXD) USER: BALTOM
DATE:(Jul 20, 2015 2:02:22 PM EDT) GIS:(BALTOM, KENNEDY SPACE CENTER, FLORIDA, USA)
SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN,

M505 APMR
Revision: 0
December 2015

2010 VOC Extent



2015 VOC Extent



LEGEND

- Monitoring Well Screened above 15 ft bls
- Monitoring Well Screened between 15 and 35 ft bls
- Monitoring Well Screened between 30 and 40 ft bls
- Monitoring Well Screened below 40 ft bls
- IAS Well
- Exceeds NADC
- Exceeds GCTL

NASA - National Aeronautics and Space Administration
APMR - Annual Performance Monitoring Report
NADC - Natural Attenuation Default Concentration
GCTL - Groundwater Cleanup Target Level
VOCs - Volatile Organic Compounds
IAS - In-Situ Air Sparge

0 80 160
SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

Comparison of Areas of Affected Groundwater (2010 and 2015)
Annual Performance Monitoring Report

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number:TL014020

Figure 4-4

CITY:(KNOXVILLE) DIV/GROUP:(ENVIR) LD:(B.ALTOM) PIC:() PM:(S.STARR) TM:(S.STARR)
PATH:(K:\KNOXVILLE_DW\GROUP (ENVIR)_GIS\BALTOM_KENNEDY\2015\TL014020\MXD\2015-1512 APMR\F4-4 M505_APMR1512 COMPARISON.MXD USER: BALTOM
SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

M505 APMR
Revision: 0
December 2015

MW0008I (1.56)
MW0012I (1.76)
MW0013I (1.72)
MW0039 (1.75)
MW0040 (1.79)
MW0007I (1.81)
MW0010I (1.82)
MW0044 (1.70)
MW0003I (1.69)
MW0038 (1.78)
MW0015 (1.74)
MW0041 (1.78)
MW0047 (1.77)
MW0019 (1.72)
MW0022 (1.77)
MW0027 (1.83)
MW0048 (1.72)
MW0005I (1.72)
MW0023 (1.74)
MW0017 (1.72)
MW0035 (1.64)
MW0021 (1.77)
MW0049 (1.59)
MW0025 (1.68)
MW0034 (1.60)
MW0032 (1.44)
MW0057 (1.72)
MW0030 (1.63)
MW0028 (1.69)
MW0051 (1.60)
MW0059 (1.64)
MW0055 (1.47)

1.80
1.70
1.70
1.60
1.50
1.60

3RD ST SE

LEGEND

- Monitoring Well Screened between 15 to 35 ft bls
- (1.83) Groundwater Elevation (ft amsl)
- Potentiometric Contour (ft amsl)
- (inferred where dashed)
- Groundwater Flow Direction

NOTES:
1) Only monitoring wells screened between 15 to 35 ft bls are shown.

NASA - National Aeronautics and Space Administration
APMR - Annual Performance Monitoring Report
NAVD88 - North American Vertical Datum of 1988
ft amsl - feet above mean sea level (NAVD88)
ft bls - feet below land surface

0 80 160
SCALE IN FEET

PROJECTION: NAD 1983 StatePlane Florida East FIPS 0901
AERIAL SOURCE: ESRI Online Services (NAIP, June 2013).

Intermediate Groundwater Elevations (15 - 35 ft bls) – May 18, 2015
Annual Performance Monitoring Report

M7-505 Treatment Tank Area
NASA Kennedy Space Center, Florida

Project Number:TL014020

Figure 4-5

CITY:(KNOXVILLE) DIV/GROUP:(ENV/GIS) LD:(BALTOM) PIC:() PM:(S.STARR) TM:(S.STARR)
PRO:(TL014020 00002\GIS\MXD\2015 15-35.MXD USER:BALTOM
SERVICE LAYER CREDITS: SOURCE: ESRI, DIGITALGLOBE, GEOEYE, EARTHSTAR GEOGRAPHICS, CNES/AIRBUS DS, USDA, USGS, AEX, GETMAPPING, AEROGRID, IGN, IGP, SWISSTOPO, AND THE GIS USER COMMUNITY

Appendix A

O&M Field Notes

DATE: 6/23/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: Nick Fletcher
Kevin Kearney

AS Hours: 152856	Time of Reading: 1047	Arrival:	☒ on	☐ off
KW Hours: 133413	Time of Reading: 1048	Departure:	☐ on	☐ off

AIR SPARGE WELLS (Zone 1 - Solonoid 1)				
AS-1	4.4	SCFM	12	PSI
AS-2	3.5	SCFM	13	PSI
AS-3	3.6	SCFM	15	PSI
AS-4	0	SCFM	16	PSI
AS-5	0	SCFM	16	PSI
AS-6	3.2	SCFM	14	PSI
AS-7	0	SCFM	0	PSI

	Flow inch-H_2O	Pressure 21.7 psi	Temp. °C
Panel:	4.8	~~23.0~~	~~25.6~~ 25.9
Pre-Cooler:		~~24.0~~	95.0
Post-Cooler:		~~23.0~~	NF 20.0
Blower intake filter:		0	~~inch-H_2O~~ 19.0
Notes: ASOOO7 IS OFF LINE			

AIR SPARGE WELLS (Zone 2 - Solonoid 2)				
AS-8	0	SCFM	18	PSI
AS-9	7.0	SCFM	19	PSI
AS-10	7.2	SCFM	19	PSI
AS-11	7.2	SCFM	17	PSI
AS-12	7.0	SCFM	17	PSI
AS-13	0	SCFM	18	PSI
AS-14	0	SCFM	19	PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	5.1	23.0	25.0
Pre-Cooler:		23.0	100
Post-Cooler:		23.0	NF
Blower intake filter:		0	inch-H_2O
Notes: AS0008 - BROKEN SCREEN			

AIR SPARGE WELLS (Zone 3 - Solonoid 3)				
AS-15	0	SCFM	15	PSI
AS-16	2.6	SCFM	13	PSI
AS-17	1.4	SCFM	16	PSI
AS-18	0	SCFM	15	PSI
AS-19	2.2	SCFM	16	PSI
AS-20	3.4	SCFM	16	PSI
AS-21	3.8	SCFM	13	PSI

Note:
Solonoid 1 & 3 are on timer 1 and operate jointly

AIR SPARGE WELLS (Zone 4 - Solonoid 4)				
AS-22	6.0	SCFM	18.0	PSI
AS-23	6.0	SCFM	18.0	PSI
AS-24	0	SCFM	21	PSI
AS-25	0	SCFM	22	PSI
AS-26	6.4	SCFM	15.0	PSI
AS-27	4.2	SCFM	16.0	PSI
AS-28	4.4	SCFM	18	PSI

Manifold Pressure at Solonoid 4:

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	4.8	23.0	25.6
Pre-Cooler:		24.0	95.0
Post-Cooler:		23.0	NF
Blower intake filter:			inch-H_2O
Notes:			

Timer 1	(Solonoid 1 & 3)	Timer Minutes:	Time Read:
Timer 2	(Solonoid 2)	Timer Minutes:	Time Read:
Timer 3	(Solonoid 3)	Timer Minutes:	Time Read:

Notes: NF - Not Functioning

DATE: 6/23/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: Mak Fletcher
Kevin Kearney

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0001-020.0	(15.0-25.0)	--	--	--	--	
M505-MW0002-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-009.0	(4.0-14.0)				--	
M505-MW0003-030.0	(25.0-35.0)				--	
M505-MW0004-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0005-009.0	(4.0-14.0)	7.07	1.86	0.25	—	
M505-MW0005-030.0	(25.0-35.0)	6.88	1.58	5.84	—	
M505-MW0006-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0006-030.0	(25.0-35.0)	--	--	--	--	
M505-MW0007-009.0	(4.0-14.0)					
M505-MW0007-030.0	(25.0-35.0)					
M505-MW0007-047.5	(45.0-50.0)	--	--	--	--	
M505-MW0008-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0008-030.0	(25.0-35.0)					
M505-MW0009-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0009-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0010-025.5	(23.0-28.0)					
M505-MW0011-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0012-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0013-025.5	(23.0-28.0)	5.32	8.87	.26	—	
M505-MW0014-009.0	(4.0-14.0)	--	--	--	--	

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0015-025.0	(22.5-27.5)					
M505-MW0016-036.0	(33.5-38.5)					
M505-MW0017-025.0	(22.5-27.5)					
M505-MW0018-036.0	(33.5-38.5)					
M505-MW0019-025.0	(22.5-27.5)	6.95	9.84	OFL	—	VIP
M505-MW0020-036.0	(33.5-38.5)	—	—	—	—	Artesian
M505-MW0021-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0022-025.0	(22.5-27.5)					
M505-MW0023-025.0	(22.5-27.5)					
M505-MW0024-035.0	(32.5-37.5)					
M505-MW0025-025.0	(22.5-27.5)	9.25	1.18	0	—	
M505-MW0026-035.0	(32.5-37.5)	9.43	3.03	14.50	—	VIP
M505-MW0027-025.0	(22.5-27.5)	--	--	--	--	

DATE: 6/23

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: Nick Fletcher
Kevin Kearney

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0028-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0029-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0030-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0031-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0032-035.0	(32.5-37.5)	8.96	2.54	6.43	—	
M505-MW0033-025.0	(22.5-27.5)	—	—	—	—	Artesion
M505-MW0034-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0035-025.0	(22.5-27.5)	5.62	1.88	(UIP) 4.59		
M505-MW0036-035.0	(32.5-37.5)	—	—	—	—	Artesion
M505-MW0037-010.0	(5.0-15.0)					
M505-MW0038-025.0	(22.5-27.5)	5.85	1.36	6.26		UIP
M505-MW0039-032.5	(30.0-35.0)	—	—	—	—	Artesian
M505-MW0040-025.0	(22.5-27.5)	4.79	8.44	(UIP) 0	—	Bubbles
M505-MW0041-025.0	(22.5-27.5)	8.07	.39	.41	—	
M505-MW0042-035.0	(32.5-37.5)	8.21	2.83	.66	—	
M505-MW0043-027.5	(20.0-35.0)	--	--	--	--	
M505-MW0044-027.5	(20.0-35.0)	5.99	8.68	(UIP) .46		Bubbling
M505-MW0045-034.5	(32.0-37.0)	5.72	0.72	0	—	
M505-MW0046-010.0	(5.0-15.0)	5.11	1.09	1.43	—	
M505-MW0047-027.5	(20.0-35.0)					
M505-MW0048-027.5	(20.0-35.0)					
M505-MW0049-027.5	(20.0-35.0)					
M505-MW0050-010.0	(5.0-15.0)					
M505-MW0051-025.0	(22.5-27.5)	7.30	2.15	0	—	
M505-MW0052-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0053-010.0	(5.0-15.0)	4.12	8.95	0 FL	—	bubbling
M505-MW0054-010.0	(5.0-15.0)	7.50	9.18	3.46	—	
M505-MW0055-025.0	(22.5-27.5)	8.04	3.19	0	—	
M505-MW0056-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0057-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0058-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0059-025.0	(22.5-27.5)	--	--	--	--	

NOTES:

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA M505			**Project Location:** KSC, FL
Date: 6/23/14	**Time:** 1030	**Conducted by:** Nick Fletcher	**Signature/Title:**
Client: NASA		**Client Contact:**	**Subcontractor companies:** None

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 O&M 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins.

	Doc #		Doc #		Doc #
☐ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Any Stop Work Interventions yesterday?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ If deviations, notify PM & client
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☒ All equipment checked & OK?
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess** the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) weeds	☒ Motion (i.e. traffic moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders wells) (L M H)	☒ Environment (i.e. heat cold, ice) (L M H)
☐ Chemical (i.e., fuel, acid, paint) (L M H)	☒ Biological (i.e., ticks, poison ivy) (L M H) bugs	☒ Radiation (i.e., alpha, sun laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H) system	☐ Personal (i.e. alone, night, not fit) (L M H)	☒ Driving (i.e. car, ATV, boat, dozer) (L M H) truck, van

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

- [x] **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - (*See statements below*)

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☐ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☐ Personal Hygiene	☐ Exposure Guidelines	☐ Decon Procedures
☐ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used ***(specify)***	☐ LPO conducted ***(specify job/JLA)***	☐ Traffic Control
☐	☐	☐ Other ***(specify)***
☐	☐	☐

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	I have read and understand the HASP
Nick Fletcher /AUS/ NFletch	1030 NF		✓
Kevin Kearney /AUS/ Kevin Kearney	1030 KSK		✓

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB,** I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain.)

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S issues:

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

22 6/23/14 NASA M505

0700 collect equipment mob to site
0930 at badging station finger printing, etc.
1000 mob to M505 area
1030 H&S meeting slow & Kearney around site begin O&M
1315 switch to zone 1&3
1600 switch to zone 2
1415 take readings in zones 1&3
1605 clean out Flow meters take some readings
1700 Phase II in effect call S. Starr
1715 S Starr gives the ok to leave
1725 leave site
2030 EOD

ODO 141535

DATE: 7/29/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: David D
DAVID W.

AS Hours:	16145.5	Time of Reading:	11:00	Arrival:	☒ on ☐ off
KW Hours:	140810	Time of Reading:	11:00	Departure:	☒ on ☐ off

AIR SPARGE WELLS (Zone 1 - Solonoid 1)				
AS-1	3.7	SCFM	12	PSI
AS-2	3.9	SCFM	15	PSI
AS-3	3.5	SCFM	17	PSI
AS-4	0	SCFM	19	PSI
AS-5	0	SCFM	18.5	PSI
AS-6	2.9	SCFM	16	PSI
AS-7	—	SCFM	—	PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	4.7	23.5	23.9
Pre-Cooler:		20.0	100.0
Post-Cooler:		20	NF
Blower intake filter:		< 1	inch-H_2O

Notes: AS0007 IS OFF LINE

AIR SPARGE WELLS (Zone 2 - Solonoid 2)				
AS-8	0	SCFM	22	PSI
AS-9	7.5	SCFM	18	PSI
AS-10	7.5	SCFM	11	PSI
AS-11	6.4	SCFM	16	PSI
AS-12	8.0	SCFM	17	PSI
AS-13	0	SCFM	22	PSI
AS-14	0	SCFM	22	PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	4.5	23.0	23.6
Pre-Cooler:		26.0	101.0
Post-Cooler:		26.0	NF
Blower intake filter:		< 1	inch-H_2O

Notes: AS0008 - BROKEN SCREEN

AIR SPARGE WELLS (Zone 3 - Solonoid 3)				
AS-15	6.4	SCFM	18	PSI
AS-16	2.2	SCFM	15	PSI
AS-17	2.0 (B)	SCFM	19	PSI
AS-18	1.4 (B)	SCFM	18	PSI
AS-19	2.5 (B)	SCFM	18	PSI
AS-20	4.7 (B)	SCFM	19	PSI
AS-21	5.0	SCFM	15	PSI

Note:
Solonoid 1 & 3 are on timer 1 and operate jointly

(B) - Bouncing.

AIR SPARGE WELLS (Zone 4 - Solonoid 4)				
AS-22	6.4	SCFM	18	PSI
AS-23	6.4	SCFM	18	PSI
AS-24	0	SCFM	21	PSI
AS-25	0	SCFM	18	PSI
AS-26	6.4	SCFM	15	PSI
AS-27	4.2	SCFM	14	PSI
AS-28	4.2	SCFM	18	PSI

Manifold Pressure at Solonoid 4:

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	4.4	23.0	25.5
Pre-Cooler:		24.0	100.0
Post-Cooler:		23	NF
Blower intake filter:		< 1	inch-H_2O

Notes:

Timer 1	(Solonoid 1 & 3)	Timer Minutes:	Time Read:
Timer 2	(Solonoid 2)	Timer Minutes:	Time Read:
Timer 3	(Solonoid 3)	Timer Minutes:	Time Read:

Notes: NF - Not Functioning

AS 8, 13, & 14 @ 0 scfm & 4,5 (zone 1)
got 14 to bounce

4,5 (zone 1) 8, 13, 14 (zone 2) 24 + 25 (zone 4) @ 0 scfm

DATE: 7/29/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVED
DAVE W.

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0001-020.0	(15.0-25.0)	--	--	--	--	
M505-MW0002-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-009.0	(4.0-14.0)				--	
M505-MW0003-030.0	(25.0-35.0)				--	
M505-MW0004-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0005-009.0	(4.0-14.0)					
M505-MW0005-030.0	(25.0-35.0)					
M505-MW0006-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0006-030.0	(25.0-35.0)	--	--	--	--	
M505-MW0007-009.0	(4.0-14.0)					
M505-MW0007-030.0	(25.0-35.0)					
M505-MW0007-047.5	(45.0-50.0)	--	--	--	--	
M505-MW0008-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0008-030.0	(25.0-35.0)					
M505-MW0009-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0009-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0010-025.5	(23.0-28.0)					
M505-MW0011-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0012-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0013-025.5	(23.0-28.0)					
M505-MW0014-009.0	(4.0-14.0)	--	--	--	--	

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0015-025.0	(22.5-27.5)					
M505-MW0016-036.0	(33.5-38.5)					
M505-MW0017-025.0	(22.5-27.5)					
M505-MW0018-036.0	(33.5-38.5)					
M505-MW0019-025.0	(22.5-27.5)					
M505-MW0020-036.0	(33.5-38.5)					
M505-MW0021-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0022-025.0	(22.5-27.5)					
M505-MW0023-025.0	(22.5-27.5)	ARTESIAN				
M505-MW0024-035.0	(32.5-37.5)	5.12@	-	775	-	UHP
M505-MW0025-025.0	(22.5-27.5)					
M505-MW0026-035.0	(32.5-37.5)					
M505-MW0027-025.0	(22.5-27.5)	--	--	--	--	

DATE: 7-29-14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID D. DAVE W

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0028-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0029-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0030-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0031-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0032-035.0	(32.5-37.5)	ARTESIAN				
M505-MW0033-025.0	(22.5-27.5)	5.90	-	0	-	
M505-MW0034-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0035-025.0	(22.5-27.5)	5.58(R)	-	+1.7	-	UIP
M505-MW0036-035.0	(32.5-37.5)	ARTESIAN			-	UHP
M505-MW0037-010.0	(5.0-15.0)					
M505-MW0038-025.0	(22.5-27.5)					
M505-MW0039-032.5	(30.0-35.0)	3.73(B)	-	+0.6	-	UHP
M505-MW0040-025.0	(22.5-27.5)	5.43	-	0.0	-	UIP
M505-MW0041-025.0	(22.5-27.5)					
M505-MW0042-035.0	(32.5-37.5)					
M505-MW0043-027.5	(20.0-35.0)	--	--	--	--	
M505-MW0044-027.5	(20.0-35.0)	5.12(R)	-	0	-	UIP
M505-MW0045-034.5	(32.0-37.0)					
M505-MW0046-010.0	(5.0-15.0)					
M505-MW0047-027.5	(20.0-35.0)					
M505-MW0048-027.5	(20.0-35.0)					
M505-MW0049-027.5	(20.0-35.0)	7.14	-	0	-	
M505-MW0050-010.0	(5.0-15.0)					
M505-MW0051-025.0	(22.5-27.5)	6.03	-	0	-	
M505-MW0052-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0053-010.0	(5.0-15.0)	ARTESIAN		-		
M505-MW0054-010.0	(5.0-15.0)	2.48(R)	-	+1.50	-	initial pressure
M505-MW0055-025.0	(22.5-27.5)	5.54	-	0	-	
M505-MW0056-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0057-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0058-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0059-025.0	(22.5-27.5)	--	--	--	--	

NOTES:

(R) = Rising
UHP = Under high pressure
(B) = bubbling
UIP = Under Initial pressure

7/29/14 NASA-M505 1 of 2

168,810 - 169,081

0730 met Dan Dankert at office. Gathered equipment and supplies. Left for site. Acquire badge at badging station.

1030 arrive at M505.

System running on arrival.

Inspected System, System running on Zone-4. Have good pressure and flow in all BS legs but 24+25, high pressure and no flow.

Checked motor inspection plate. 460v Reed shows 26.2 Amp rating. System motor amps were at 17.6.

Closed valves down on other BS wells from ~6 scfm to ~2.5 scfm to isolate more pressure to BS 24+25. Pressure in 24+25 raised to ~28psi. Flow indicator in BS-25 bounced a little intermittently but no steady flow. BS 24 showed no flow at all.

1200 phase 2 lightning warning. Took cover.

1210 phase 2 lightning warning called off.

System had switched to Zones 1+3 in auto timer. Put system back in Zone-4 in hand.

7/29/14 / NASA M-505 1 of 2

- Wells 24 & 25 stayed about the same. Some jumping on the flow indicator for BS-25, no movement on BS-24. Appears to me that the well screens are silted up and need to be re-developed.
- 1330 Switched to Zone-2 in Hand. Let System run for 5 minutes. No flow in BS wells 8, 13 & 14. Closed values down on BS wells 9-12 to ~2 SCFM. Pressures went up to 26-28 psi in 8, 13 & 14. Flow indicator began bouncing up to ~1 SCFM then back to 0 on BS-14. No flow movement on 8 & 13. Wells also appear to be fouled w/ silt.
- Switched over to Zones 1 & 3 in Auto.
- Let System run for a few minutes. No flow indicated in BS wells 4 & 5. Closed off values on other wells to bring pressure to 27-28 psi on BS wells 4 & 5. Let System run for a few minutes but no movement in flow indicators and pressure remained steady-high. Appears 4 & 5 are also silted in.
- Put valving back to normal operating settings. Left System running on Zone 1 & 3 in Auto. Secured Site, off site at [redacted] 1600, after taking well readings. Back at unloads at 1830. TBH (10.5)

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA-M505			**Project Location:** Cape Canaveral, FL.
Date: 7/2/14	**Time:** 1030	**Conducted by:** DW	**Signature/Title:** Tech-5
Client: NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Inspect BS system. 3 Make system adjustments 5 _____

2 Adjust to make breakthrough 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: None

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins.

	Doc #		Doc #		Doc #
☑ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). Check if yes !

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Any Stop Work Interventions yesterday?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ If deviations, notify PM & client
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☑ All equipment checked & OK?
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ Staff knows gathering points?

☐ Topics from Corp H&S to cover?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess** the risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category

☐ Gravity (i.e., ladder, scaffold, trips)	(L M H)	☑ Motion (i.e., traffic, moving water)	(L M H)	☑ Mechanical (i.e., augers, motors)	(L M H)
☑ Electrical (i.e., utilities, lightning) Panel	(L M H)	☑ Pressure (i.e., gas cylinders, wells)	(L M H)	☑ Environment (i.e., heat, cold, ice)	(L M H)
☐ Chemical (i.e., fuel, acid, paint)	(L M H)	☐ Biological (i.e., ticks, poison ivy)	(L M H)	☑ Radiation (i.e., alpha, sun, laser)	(L M H)
☑ Sound (i.e., machinery, generators) Compr.	(L M H)	☐ Personal (i.e. alone, night, not fit)	(L M H)	☑ Driving (i.e. car, ATV, boat, dozer)	(L M H)

Continue TRACK Process on Page 2

8/6/14 NASA-M505

169,559 - 169,824

8/5/14 - 1445 - 154 plus drums (1.0)

0630 in office, met up Rik, loaded truck 0655 left for site.

0900 arrive at badging. Acquired badges.

0910 on site. System off on arrival.

Located target AS wells at manifold. Took hoses off of pipe fittings to clear air pressure from wells. Opened AS wells 24+25

Tagged OTB. AS-24: 39.77 / AS-25: 34.22

Both bottoms tagged hard, felt no soft solids.

Ran tubing w/surge block down AS-24.

Surged well and checked water up to bucket.

Continued surge/checking well. Water did not appear very turbid. Hooked tubing to pump and pumped 10 gallons while surging intermittently. Water never got very turbid and well never cont dry.

Open hoses at AS 24 & 25. Turned system on Sol. 4. Blew water out of lines. hooked lines back up. Checked manifold. no flow at AS 24 & 25. Pressure ~25 psi.

Closed other AS well valves to flows of ~4 scfm, raised pressure to ~27 psi in AS 24 & 25

→

Let run to see if we could get breakthrough.

- DTB for AS-13: 34.53' Hard bottom.
- DTB for AS-14: 34.57' Hard Bottom
- Pumped 10 gallons from each well w/ a whale pump (2 "wells") Water slightly turbid.
- Turned System to Zone-2 AS 13 & 14 flow indicators are bouncing in flow meters. Left running is Zone-2.
- Moved to AS wells 17-20.
- DTB: AS-17 34.50, Hard bottom, Pumped 7.5 gallons w/ whale pump. Water Grey-Silty at first then cleared w/ some sand and grey scale. Water clear at end of Pumping.
- AS-18 DTB: 34.56, Hard bottom Slightly soft Pumped 7.5 gallons. Water was grey-silty at first but cleared up. Some grey scale but clear at end of Pumping.
- AS-19 DTB: 34.67' soft bottom.
- Pumped 7.5 gallons Grey-Silty at first but cleared up. Some grey scale and fine sands. Clear at end of Pumping.
- AS-20 DTB: 34.65' soft bottom. Pumped ~2 gal from bottom, went to surge the well w/ the

Pump and a large ammount of air started coming through the screen to the surface.
- System was running on Zone-2. Shut system off but air continued to come up through the well cavitating the pump.
- Pulled pump and closed the well.
- Turned System on Zone-3.
- AS-17 3 SCFM steady at 21 PSI
- AS-18 bouncing between 1.5-3 20 PSI
- AS-19 bouncing up to 2 SCFM 20 PSI
- AS-20 ~3 SCFM steady 22 PSI.
- Reset System in Full Auto. System running on Zone-1 & 3.
- Took Amp Readings on Air Comp motor Starter L-1: 16.4 L-2: 16.2 L-3: 16.3
- Checked phase loads. 1-274.0V / 2-274.7V 3-274.2V / Loads across phases: 1-2: 474.2V 1-3: 474.4V / 2-3: 475.5V
- Voltage loads look good and balanced.
- Hour meter at 1806: 16259.5
- Loaded truck; Secured site, off site at
- Back and unloaded at 2045

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA - MSOS		**Project Location:** Cape Canaveral, FL	
Date: 8/1/14	**Time:** 0920	**Conducted by:** DW	**Signature/Title:** Field Tech
Client: NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Re-develop AS wells 3 Try to get breakthrough. 5 _____

2 Restart System 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: none

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☑ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). Check if yes :

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Any Stop Work Interventions yesterday?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ If deviations, notify PM & client
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☑ All equipment checked & OK?
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ Staff knows gathering points?

☐ Topics from Corp H&S to cover?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **A**ssess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☑ Motion (i.e., traffic, moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)
☑ Electrical (i.e., utilities, lightning) (L M H) Panel	☑ Pressure (i.e., gas cylinders, wells) (L M H)	☑ Environment (i.e., heat, cold, ice) (L M H)
☐ Chemical (i.e., fuel, acid, paint) (L M H)	☑ Biological (i.e., ticks, poison ivy) (L M H) Snakes Insects	☑ Radiation (i.e., alpha, sun, laser) (L M H)
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☑ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

DRUM INVENTORY LOG

Contractor: ARCADIS

Site	Generation Date	Media	Source	o/o Full	Pallet 10 (Bar Code)	Drum Bar Code& (Number)	NASA Contact	Location of Pallet	IDW Source	Drum pH	Maximum Concentrations (ug/L)	Tie Down Strap Yes/ No
M505	5/22/13 - 5/25/13	GW	GW Sampling	85	177813	196988	Harry Plaza	South of POL (M7-554)	Annual Sampling of MWs	7.52	TCE: 18 ug/l; cDCE: 240 ug/l; VC: 87 ug/l; Xylenes:	Yes
	8/6/14 - 8/6/14	GW	well Development	85		196989			AS well development	7.5		
	8/6/14 -	GW	well Development	20		196990			AS well development	7.5		

NOTES:

8/19/14 WASA MW505

Onm - Dnp

0700 mob to WASA
0900 onsite
0930 DJW onsite, safety meeting
1000 Turn system to Zone 1 + 3
close off AS-1 thru AS-9
1100 Develop AS-25
1200 Development complete
• Turn Zone II (4) on •
- breakthrough @ AS-25 ✓
1230 Dump purge water into Drum
• label Drum 1300 Scott onsite
1300-1430 lunch (0.5)
1430 begin well readings @ Zone 4
1530 Zone 4 complete - Switched to Zone 3
1615 Begin well readings @ Zone 3
1650 Zone 3 completed, switched to Zone 2
1815 Zone 2 completed, Switched System to AUTO
• Organized trucks
1830 End of Day
11.5 - 0.5 (Lunch) = (11)

Drum # 196991 85% Full

MOB To Vero (1.3) + .2 computer work/printing = (1.5)
charged to Tom's Mobil

8/19/14 NASA-M505

170,216 - 170,487

- 0700 left for Site. Stopped for fuel, ice + water.
- 0915 Picked up barge. 0930 on site.
- Met w/ David D. H+S meeting.
- As-25 36.80' / Top of Cap is ~3.45' from grade
- Took 1/2" PE tubing and cut holes in the end and plugged the tip. Hooked to garden hose and jetted out the well screen for As-25. Captured water in buckets and poured water to drum.
- Jetted out ~30 gallons and then pumped ~20 gallons w/ small trash pump in two rounds.
- Jetted 15 gal / pumped 10 gallons / Jetted 15 gallons pumped 10 gallons.
- Turned Zone-3 back on and saw break through on As-25. Let zone run for 1 hour.
- Began taking monthly otm readings.
- Took readings for Zone-3, switched to Zone-1.
- Waited ~1 hour and took Zone-2 readings.
- Switched to Zone 2, waited ~45 minutes and took readings.
- Put system back in Auto. Cleaned up loaded truck, off site at 1820. Back at 2030. unloaded.

TDH - (3.5)

DATE: 8/19/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID D.
DAVID W.

AS Hours:	16977.5	Time of Reading:	15:27	Arrival:	☑ on ☐ off
KW Hours:	143812	Time of Reading:	15:27	Departure:	☑ on ☐ off

AIR SPARGE WELLS (Zone 1 - Solonoid 1)				
AS-1		SCFM		PSI
AS-2		SCFM		PSI
AS-3	turned off	SCFM		PSI
AS-4		SCFM		PSI
AS-5		SCFM		PSI
AS-6		SCFM		PSI
AS-7		SCFM		PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	4.7	23.0	27.5
Pre-Cooler:		30	100
Post-Cooler:		29	NF
Blower intake filter:		<1	inch-H_2O

Notes: AS0007 IS OFF LINE

AIR SPARGE WELLS (Zone 2 - Solonoid 2)				
AS-8		SCFM		PSI
AS-9		SCFM		PSI
AS-10	1.9	SCFM	15	PSI
AS-11	2.7	SCFM	13	PSI
AS-12	3.8	SCFM	13	PSI
AS-13	0	SCFM	15	PSI
AS-14	4.5 (B)	SCFM	15	PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	5.0	23.0	27.1
Pre-Cooler:		34	100
Post-Cooler:		32	NF
Blower intake filter:		<1	inch-H_2O

Notes: AS0008 - BROKEN SCREEN

AIR SPARGE WELLS (Zone 3 - Solonoid 3)				
AS-15	3.2	SCFM	12	PSI
AS-16	3.0	SCFM	13	PSI
AS-17	4.0	SCFM	20	PSI
AS-18	3.4	SCFM	25	PSI
AS-19	3.0 (B)	SCFM	25	PSI
AS-20	4.0	SCFM	23	PSI
AS-21	4.0	SCFM	13	PSI

Note:
Solonoid 1 & 3 are on timer 1 and operate jointly

(B) = bounetry.

AIR SPARGE WELLS (Zone 4 - Solonoid 4)				
AS-22	2.1	SCFM	18	PSI
AS-23	0	SCFM	19	PSI
AS-24	0	SCFM	26	PSI
AS-25	5.0	SCFM	25	PSI
AS-26	5.0	SCFM	17	PSI
AS-27	5.5	SCFM	16	PSI
AS-28	5.1	SCFM	18	PSI

Manifold Pressure at Solonoid 4:

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	~3.8	23.0	27.3
Pre-Cooler:		29	105
Post-Cooler:		28	NF
Blower intake filter:		<1	inch-H_2O

Notes:

Timer 1	(Solonoid 1 & 3)	Timer Minutes:	45	Time Read:	16826
Timer 2	(Solonoid 2)	Timer Minutes:		Time Read:	
Timer 3	(Solonoid 4)	Timer Minutes:	142	Time Read:	1530

Notes: NF - Not Functioning

- Developed AS-25 - Breakthrough Successful
- Turned AS-1 thru AS-7 off per Scott Starr
- Repaired magnahelix connected to Panel (Display) for "AS FLOW" - AIR LINE WAS BLOWN

DATE: 8/19/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID D.
DAVID W.

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0001-020.0	(15.0-25.0)	--	--	--	--	
M505-MW0002-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-009.0	(4.0-14.0)				--	
M505-MW0003-030.0	(25.0-35.0)				--	
M505-MW0004-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0005-009.0	(4.0-14.0)					
M505-MW0005-030.0	(25.0-35.0)					
M505-MW0006-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0006-030.0	(25.0-35.0)	--	--	--	--	
M505-MW0007-009.0	(4.0-14.0)					
M505-MW0007-030.0	(25.0-35.0)					
M505-MW0007-047.5	(45.0-50.0)	--	--	--	--	
M505-MW0008-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0008-030.0	(25.0-35.0)					
M505-MW0009-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0009-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0010-025.5	(23.0-28.0)					
M505-MW0011-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0012-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0013-025.5	(23.0-28.0)					
M505-MW0014-009.0	(4.0-14.0)	--	--	--	--	

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0015-025.0	(22.5-27.5)					
M505-MW0016-036.0	(33.5-38.5)					
M505-MW0017-025.0	(22.5-27.5)	5.57	4.18	0		
M505-MW0018-036.0	(33.5-38.5)	5.75	5.19	+65.6		V.I.P.
M505-MW0019-025.0	(22.5-27.5)					
M505-MW0020-036.0	(33.5-38.5)					
M505-MW0021-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0022-025.0	(22.5-27.5)					
M505-MW0023-025.0	(22.5-27.5)	4.71	2.05	+0.9		
M505-MW0024-035.0	(32.5-37.5)	4.58	6.27	+0.5	-	
M505-MW0025-025.0	(22.5-27.5)	7.28	3.80	0	-	
M505-MW0026-035.0	(32.5-37.5)	7.50	7.19	+0.5	-	
M505-MW0027-025.0	(22.5-27.5)	--	--	--	--	

DATE: 8/19/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID W. DAVID

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0028-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0029-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0030-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0031-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0032-035.0	(32.5-37.5)	ARTESIAN				
M505-MW0033-025.0	(22.5-27.5)	7.91	5.52	+9.6	-	UID
M505-MW0034-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0035-025.0	(22.5-27.5)					
M505-MW0036-035.0	(32.5-37.5)					
M505-MW0037-010.0	(5.0-15.0)					
M505-MW0038-025.0	(22.5-27.5)					
M505-MW0039-032.5	(30.0-35.0)	Artesian				
M505-MW0040-025.0	(22.5-27.5)	3.80(R)	6.87	-		U.I.P.
M505-MW0041-025.0	(22.5-27.5)	4.31	2.43	+5.2		
M505-MW0042-035.0	(32.5-37.5)	4.40	5.01	+9.6		U.I.P
M505-MW0043-027.5	(20.0-35.0)	--	--	--	--	
M505-MW0044-027.5	(20.0-35.0)	1.3	7.51	+14.0	-	U.I.P
M505-MW0045-034.5	(32.0-37.0)					
M505-MW0046-010.0	(5.0-15.0)					
M505-MW0047-027.5	(20.0-35.0)					
M505-MW0048-027.5	(20.0-35.0)					
M505-MW0049-027.5	(20.0-35.0)					
M505-MW0050-010.0	(5.0-15.0)	ARTESIAN				
M505-MW0051-025.0	(22.5-27.5)	5.68(R)	3.48	+1.0	-	
M505-MW0052-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0053-010.0	(5.0-15.0)	4.36	8.88	+1.3	-	
M505-MW0054-010.0	(5.0-15.0)	ARTESIAN		+17.6		Bubbling over
M505-MW0055-025.0	(22.5-27.5)	5.90	3.10	0		
M505-MW0056-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0057-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0058-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0059-025.0	(22.5-27.5)	--	--	--	--	

NOTES: (R) Rising.

UIP = under initial pressure

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxx.xxxx.xxxxx - dd/mm/year*

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA M505		**Project Location:** KSC - NASA	
Date: 8/19/14	**Time:** 0930	**Conducted by:** DAVID D.	**Signature/Title:** Tech 5
Client: NASA		**Client Contact:** HARRY OLAZA	**Subcontractor companies:**

Preparing for the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Water Jet AS well
2 Table well Readings
3
4
5
6

Are there any hazards in the work area that may have hazards in ARCADIS operations? ☐ If there are none, write "None" here:

If yes, describe them here:

How will they be controlled?

Is a permit required?

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discussion Items - Review as a group, check if yes:

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☐ Staff knows gathering points?

Comments: _____

Hazard Review - Review as a group, check if yes, circle (L M H) for low, medium or high hazard, list hazards in the work area:

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) Slips, trips & falls	☒ Motion (i.e., traffic, moving water) (L M H) Cones	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H)
☐ Chemical (i.e., fuel, solid, paint) (L M H)	☒ Biological (i.e., ticks, poison ivy) (L M H)	☒ Radiation (i.e., alpha, sun, laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H) SYSTEM	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control Hazards - Review the hazards identified in the JLA and other control measures. Discuss any additional control procedures.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☒ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☒ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name (Printed)	Signature	Company	Time In	Time Out	Initials
David Dankert		Arcadis	0930		
David Welch		Arcadis	0930		

Site Entry Requirements - Review as a group, check if yes:

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3769.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9555 and Corp H&S at 1.720.344.3500

Site Entry Log - Review as a group, check if yes:

	In	Out
	In	Out
	In	Out
	In	Out

I will STOP the job any time anyone is concerne uncertain about health & safety or if anyone iden hazard or additional mitigation not recorded in th project, job or task hazard assessment.

I will be alert to any changes in personnel, condi the work site or hazards not covered by the origi hazard assessments.

If it is necessary to STOP THE JOB, I will perfor TRACK; and then amend the hazard assessmen HASP as needed.

I will not coach a subcontractor or other party wi work unless it is absolutely necessary and then o I have done TRACK and I have thoroughly contro hazard.

Post Daily Activities Review - Review at end of day or before next days work. (Check those applicable and explain):

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work Interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S issues:

Keep this form with the binder

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

9/16/14 NASA M505 O+M

0630	m/b to NASA
0800	ORGANIC Drum + container
0930	onsite, SYSTEM Running.
0945	Took SYSTEM READINGS, Put system in Hand, Zone IV running @ Arrival
1000	Begin Well readings (Zone 4)
1130	SYSTEM SWITCHED TO Zone 3
1200	Begin well readings (Zone 3)
1300	SYSTEM switched to Zone 2
1330	Begin well readings (Zone 2)
1420	O+M complete, SYSTEM in Auto
1430	CHP DRUM SAMPLE & prep container for shipping
1530	m/b To C&F for Pallet for Press Site for Monday work
1600	DRUM + Pallet set up @ Press site
1630	SAMPLE shipped, Demob
1830	End of DAY

12

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA MSDS		**Project Location:** KSC, NASA	
Date: 9/16/14	**Time:** 0930	**Conducted by:** DAVID DANKERL	**Signature/Title:** Tech 5
Client: NASA		**Client Contact:** HARRY PLAZA	**Subcontractor companies:**

Think through the Tasks (list the tasks for the day):

1 System flow
2 well read.
3
4
5
6

Identify Hazards and Controls

Are there any hazards that cannot be controlled to ARCADIS standards? ☐

If yes, describe them here:

How will they be controlled?

If there are none, write "None" here:

Work Permits required for the day:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss the following questions to the group and check if yes:

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments:

Identify Hazards and Controls - Review all applicable hazards for the day. Check all that apply.

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) Slips, trips & falls	☒ Motion (i.e., traffic, moving water) (L M H) ppe, cones	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H) well pressure	☒ Environment (i.e., heat, cold, ice) (L M H) hydrate, breaks
☒ Chemical (i.e., fuel, acid, paint) (L M H) Vac's	☒ Biological (i.e., ticks, poison ivy) (L M H) Deet	☒ Radiation (i.e., alpha, UV, laser) (L M H) Sun Screen
☒ Sound (i.e., machinery, generators) (L M H) ppe - system noise	☒ Personal (i.e. alone, night, not fit) (L M H) Awareness	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Control Measures and Procedures

Rev. 02 1 February 2010
ARC HSGE001

Tailgate pg.1

Pads of this form at available from Alphagraphics

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control Measures and Procedures - Review all applicable hazards and control measures for the day. Check all that apply. Discuss any additional control procedures.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *{See statements below}*)

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☒ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name (Print) and Signature

Name (Print) and Signature	Time In
David Dankerl / Arcadis	0930

Important Information and Instructions

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3758.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.6536 and Corp H&S at 1.720.344.3500

Time In and Out for Intermittent Visitors

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned uncertain about health & safety or if anyone ide hazard or additional mitigation not recorded in t project, job or task hazard assessment.

I will be alert to any changes in personnel, cond the work site or hazards not covered by the orig hazard assessments.

If it is necessary to STOP THE JOB, I will perfo TRACK; and then amend the hazard assessmen HASP as needed.

I will not assist a subcontractor or other party w work unless it is absolutely necessary and then I have done TRACK and I have thoroughly consi hazard.

Post Daily Activities Review - Review at end of day or before next day's work. Check those applicable and explain:

☐ Lessons learned and best practices learned today:

☐ Incidents that occurred today:

☐ Any Stop Work Interventions today?

☐ Corrective/Preventive Actions needed for future work:

☐ Any other H&S issues:

Emergency Information

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

Rev.02 1 February 2010
ARC HSGE001

Tailgate pg.2

Pads of this form are available from Alphagraphics

DATE: 9/16/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID D.

AS Hours: 17082.9	Time of Reading: 1016	Arrival:	☑ on	☐ off
KW Hours: 149983	Time of Reading: 1015	Departure:	☑ on	☐ off

AIR SPARGE WELLS (Zone 1 - Solonoid 1)			
AS-1		SCFM	PSI
AS-2		SCFM	PSI
AS-3		SCFM	PSI
AS-4		SCFM	PSI
AS-5	OFFline	SCFM	PSI
AS-6		SCFM	PSI
AS-7		SCFM	PSI

Zone 3	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.7	23.0	26.4
Pre-Cooler:		31.0	105
Post-Cooler:		29.0	NF
Blower intake filter:		<1.0	inch-H_2O

Notes: ASOOO7 IS OFF LINE

AIR SPARGE WELLS (Zone 2 - Solonoid 2)				
AS-8	OFFline	SCFM	0	PSI
AS-9	OFFline	SCFM	0	PSI
AS-10	3.1	SCFM	16	PSI
AS-11	3.2	SCFM	14	PSI
AS-12	4.0	SCFM	15	PSI
AS-13	0.0	SCFM	17	PSI
AS-14	5.2	SCFM	16	PSI

Zone 2	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.8	23.0	27.0
Pre-Cooler:			
Post-Cooler:			NF
Blower intake filter:		<1.0	inch-H_2O

Notes: AS0008 - BROKEN SCREEN

AIR SPARGE WELLS (Zone 3 - Solonoid 3)				
AS-15	0	SCFM	12	PSI
AS-16	0	SCFM	9.5	PSI
AS-17	3.0	SCFM	19	PSI
AS-18	2.8	SCFM	26	PSI
AS-19	2.9	SCFM	17	PSI
AS-20	5.7	SCFM	21	PSI
AS-21	1.5	SCFM	12	PSI

Note:
Solonoid 1 & 3 are on timer 1 and operate jointly

AIR SPARGE WELLS (Zone 4 - Solonoid 4)				
AS-22	1.1	SCFM	16	PSI
AS-23	7.4	SCFM	21	PSI
AS-24	0	SCFM	27	PSI
AS-25	2.3 (B)	SCFM	26	PSI
AS-26	1.3	SCFM	0	PSI
AS-27	5.0	SCFM	15	PSI
AS-28	4.4	SCFM	19	PSI

Manifold Pressure at Solonoid 4:

Zone 4	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.6	23.0	25.5
Pre-Cooler:		29.5	100
Post-Cooler:		28.0	NF
Blower intake filter:		<1.0	inch-H_2O

Notes:

Timer 1	(Solonoid 1 & 3)	Timer Minutes:	43	Time Read:	-1000
Timer 2	(Solonoid 2)	Timer Minutes:		Time Read:	
Timer 3	(Solonoid 3)	Timer Minutes:		Time Read:	

Notes: NF - Not Functioning

- AS-22 valve closed Ask PM ✓ adjusted AS-23 to 6.0 scfm
- AS-26 valve closed Ask PM ✓ (AS-26) opened per PM (3.0 SCFM)
- AS-15 valve closed Ask PM ✓ (Turn on) 4.0 scfm
- AS-16 valve closed Ask PM ✓ (Turn on) 4.0 scfm
- AS-21 Valve closed Ask PM ✓

(B) = bouncing flow ball

DATE: 9/16/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: David D

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0001-020.0	(15.0-25.0)	--	--	--	--	
M505-MW0002-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-009.0	(4.0-14.0)				--	
M505-MW0003-030.0	(25.0-35.0)				--	
M505-MW0004-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0005-009.0	(4.0-14.0)					
M505-MW0005-030.0	(25.0-35.0)					
M505-MW0006-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0006-030.0	(25.0-35.0)	--	--	--	--	
M505-MW0007-009.0	(4.0-14.0)					
M505-MW0007-030.0	(25.0-35.0)					
M505-MW0007-047.5	(45.0-50.0)	--	--	--	--	
M505-MW0008-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0008-030.0	(25.0-35.0)					
M505-MW0009-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0009-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0010-025.5	(23.0-28.0)					
M505-MW0011-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0012-025.5	(23.0-28.0)	--	--	--	--	
M505-MW0013-025.5	(23.0-28.0)	RV	Parked over	Well		
M505-MW0014-009.0	(4.0-14.0)	--	--	--	--	

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0015-025.0	(22.5-27.5)					
M505-MW0016-036.0	(33.5-38.5)					
M505-MW0017-025.0	(22.5-27.5)	5.35	3.42	0.0		
M505-MW0018-036.0	(33.5-38.5)	5.17	3.12	+0.14		UIP
M505-MW0019-025.0	(22.5-27.5)					
M505-MW0020-036.0	(33.5-38.5)					
M505-MW0021-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0022-025.0	(22.5-27.5)					
M505-MW0023-025.0	(22.5-27.5)	3.96	2.26	+0.10		
M505-MW0024-035.0	(32.5-37.5)	A@705'				UHP
M505-MW0025-025.0	(22.5-27.5)	6.32	0.97	0.0		
M505-MW0026-035.0	(32.5-37.5)	6.54	2.01	+0.14		
M505-MW0027-025.0	(22.5-27.5)	--	--	--	--	

UIP= Under Initial pressure
UHP= Under High pressure

DATE: 9/16/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: DAVID O

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0028-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0029-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0030-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0031-025.0	(22.5-27.5)	6.20	5.58	--	--	
M505-MW0032-035.0	(32.5-37.5)	~~ARTESIAN~~		+8.23		UHP
M505-MW0033-025.0	(22.5-27.5)	8.06	1.91	+4.39		UHP
M505-MW0034-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0035-025.0	(22.5-27.5)	3.88	0.17	0.00		UIP
M505-MW0036-035.0	(32.5-37.5)	ARTESIAN				UHP
M505-MW0037-010.0	(5.0-15.0)					
M505-MW0038-025.0	(22.5-27.5)					
M505-MW0039-032.5	(30.0-35.0)	ARTESIAN				UHP
M505-MW0040-025.0	(22.5-27.5)	3.88	7.61	0.00		UIP/Bubbling
M505-MW0041-025.0	(22.5-27.5)	5.63	1.16	+0.10		UIP
M505-MW0042-035.0	(32.5-37.5)	5.68	1.39	0.0		
M505-MW0043-027.5	(20.0-35.0)	--	--	--	--	
M505-MW0044-027.5	(20.0-35.0)	3.95	7.18	0.0		UIP/bubbling
M505-MW0045-034.5	(32.0-37.0)					
M505-MW0046-010.0	(5.0-15.0)					
M505-MW0047-027.5	(20.0-35.0)					
M505-MW0048-027.5	(20.0-35.0)					
M505-MW0049-027.5	(20.0-35.0)	7.98	2.14	0.0		
M505-MW0050-010.0	(5.0-15.0)	6.50	7.68	+0.13		
M505-MW0051-025.0	(22.5-27.5)	6.25	2.12	0.0		
M505-MW0052-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0053-010.0	(5.0-15.0)	4.95	7.69	+0.33		UIP/Bubbling
M505-MW0054-010.0	(5.0-15.0)	0.5	7.41	41.54		UIP/Bubbling
M505-MW0055-025.0	(22.5-27.5)	5.44	2.95	0.0		
M505-MW0056-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0057-025.0	(22.5-27.5)	--	--	--	--	
M505-MW0058-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0059-025.0	(22.5-27.5)	--	--	--	--	

NOTES: UHP = Under high pressure
UIP = Under Initial pressure

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Order No.: RR87442
Date: cadis9/15/20
Technician: MW

Company: Arcadis
Contact: David Dankrel
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
85	0	✓	
Handheld Display	06J2047AC	✓	

Item	Tech	QC	Item	Tech	QC
Cable 10M	✓		AC Adaptor		
Flow Cell			Stand		
Barb Kit			D.O Kit	✓	
Storage / Cal Cup			Calibration Kit		
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries	✓				
Display Comm. Cable					
Sonde Comm. Cable					

Calibration Report

85			0	
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)			4AA941
pH 7 Buffer	(+/- .2)			140516B
pH mV for 7 Buffer	(0 +/- 50)			
pH 4 Buffer	(+/- .2)			3AL686
pH mV for 4 Buffer	(180 +/- 50)			
pH 10 Buffer	(+/- .2)			#REF!
pH mV for 10 Buffer	(-180 +/- 50)			
ORP mV, 237.5	(+/- 20 mV)			3AL562
DO 100% Sat	(+/- 2%)	99.9%	100.0%	
0% DO Check	(+/- 2%)			PS1
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

10/22/14 NAIA M505

0615	collect equipment Ranger ODO 147239 mob to site
0824	Arrive at badging collect PIV badge, get ice & water
0910	on site Mallory Off & Susan Sitkoff on site H&S talk through activities Begin Zone 2 O&M
1100	Finish Zone 2, switch to Zone 4 see O&M Forms for system stop & restart info
1610	OFF-SITE
1830	Gas up truck, unload meters, etc
1850	EOD Ranger ODO 147507

DATE: 10/22/14 Site Specific Operation and Maintenance Form **Name:** NDF, SS, MO

NASA KSC FACILITY M7-505

AS Hours: 179454	Time of Reading: 0928	Arrival:	☒ on	☐ off
KW Hours: 158823	Time of Reading: 0928	Departure:	☐ on	☐ off

AIR SPARGE WELLS (Zone 1 - Solonoid 1)				
AS-1		SCFM		PSI
AS-2		SCFM		PSI
AS-3		SCFM		PSI
AS-4		SCFM		PSI
AS-5		SCFM		PSI
AS-6		SCFM		PSI
AS-7		SCFM		PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.5	23.0	23.7 MO
Pre-Cooler:		35	20.5 MO
Post-Cooler:			
Blower intake filter:			inch-H_2O
Notes:			

AIR SPARGE WELLS (Zone 2 - Solonoid 2)				
AS-8		SCFM		PSI
AS-9		SCFM		PSI
AS-10		SCFM		PSI
AS-11	1.75	SCFM	13.5	PSI
AS-12	2	SCFM	13.5	PSI
AS-13	0	SCFM	14	PSI
AS-14	1	SCFM	14	PSI

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.5	23.0	23.7
Pre-Cooler:		35	20.5
Post-Cooler:		35	— broken meter
Blower intake filter: 0			inch-H_2O
Notes:			

AIR SPARGE WELLS (Zone 3 - Solonoid 3)				
AS-15	1	SCFM	13	PSI
AS-16	2	SCFM	13	PSI
AS-17	0	SCFM	13.5	PSI
AS-18	0	SCFM	13	PSI
AS-19	0	SCFM	13	PSI
AS-20	0	SCFM	13	PSI
AS-21	0	SCFM	9	PSI

Note:
Solonoid 1 & 3 are on timer 1 and operate jointly

	Flow	Press	Temp
Panel:	5.6	18.7	24.0
Pre-Cooler:		18.5	14.5
Post-Cooler		17	— broken meter

Blower intake filter: 0

LETF AIR SPARGE WELLS (Zone 4 - Solonoid 4)					
AS-1	22	0	SCFM	15	PSI
AS-2	23	1.75	SCFM	20	PSI
AS-3	24	0	SCFM	27	PSI
AS-4	25	3.75	SCFM	25	PSI
AS-5	26	5	SCFM	24	PSI
AS-6	27	4.5	SCFM	16	PSI
AS-7	28	3.75	SCFM	18	PSI
AS-8			SCFM		PSI
AS-9			SCFM		PSI

Flow 0, turned on all open 5 scfm

Manifold Pressure at Solonoid 4:

	Flow inch-H_2O	Pressure psi	Temp. °C
Panel:	6.5	23.0	24.9
Pre-Cooler:		29.5	21.5
Post-Cooler:		28	— broken meter.
Blower intake filter:		0	inch-H_2O
Notes:			

Timer 1	(Solonoid 1 & 3)	Timer Minutes:	240	Time Read:	928
Timer 2	(Solonoid 2)	Timer Minutes:	131	Time Read:	928
Timer 3	(Soloncid 3)	Timer Minutes:	240	Time Read:	928

Notes: 1340 Motor fault alarm – shut down again
1430. Restart – close slightly some zone 3 AS wells – shut down again.
1454 – Restart System – tripped motor starter.

* Need to Add oil to compressor next time – when cool

DATE: 10/22/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: NDE
MO

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0001-020.0	(15.0-25.0)	--	--	--	--	
M505-MW0002-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0003-030.0	(25.0-35.0)	--	--	--	--	
M505-MW0004-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0005-009.0	(4.0-14.0)	6.20	0.46	0.37	—	
M505-MW0005-030.0	(25.0-35.0)	—	—	—	—	Artesian
M505-MW0006-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0006-030.0	(25.0-35.0)					
M505-MW0007-009.0	(4.0-14.0)	5.30	0.24	0.0	—	
M505-MW0007-030.0	(25.0-35.0)	5.33	0.29	-4.00	--	
M505-MW0007-047.5	(45.0-50.0)	5.12	2.27	-1.61	--	
M505-MW0008-009.0	(4.0-14.0)	--	--	--	--	
M505-MW0008-030.0	(25.0-35.0)					
M505-MW0009-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0009-025.5	(23.0-28.0)					
M505-MW0010-025.5	(23.0-28.0)	5.39	4.37	0.29	—	
M505-MW0011-010.0	(5.0-15.0)	--	--	--	--	
M505-MW0012-025.5	(23.0-28.0)					
M505-MW0013-025.5	(23.0-28.0)	6.12	3.72	0.0	—	
M505-MW0014-009.0	(4.0-14.0)	--	--	--	--	

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0015-025.0	(22.5-27.5)					
M505-MW0016-036.0	(33.5-38.5)					
M505-MW0017-025.0	(22.5-27.5)	6.38	0.97	0.0	—	
M505-MW0018-036.0	(33.5-38.5)	rising	1.37	12.06	—	VIP
M505-MW0019-025.0	(22.5-27.5)	6.32	4.21	3.07	—	
M505-MW0020-036.0	(33.5-38.5)	rising	—	OFL	—	VIP/artesian
M505-MW0021-025.0	(22.5-27.5)					
M505-MW0022-025.0	(22.5-27.5)					
M505-MW0023-025.0	(22.5-27.5)	5.94	1.06	1.29	—	
M505-MW0024-035.0	(32.5-37.5)	5.95	2.46	1.18	—	
M505-MW0025-025.0	(22.5-27.5)	7.91	3.27	0.18	—	
M505-MW0026-035.0	(32.5-37.5)	7.96	4.35	1.69	—	
M505-MW0027-025.0	(22.5-27.5)					

DATE: 10/22/14

Site Specific Operation and Maintenance Form
NASA KSC FACILITY M7-505

Name: NDF, MO

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
M505-MW0028-025.0	(22.5-27.5)					
M505-MW0029-025.0	(22.5-27.5)					
M505-MW0030-025.0	(22.5-27.5)					
M505-MW0031-025.0	(22.5-27.5)					
M505-MW0032-035.0	(32.5-37.5)					Artesian
M505-MW0033-025.0	(22.5-27.5)	7.81	0.70	8.93	—	UIP
M505-MW0034-025.0	(22.5-27.5)					
M505-MW0035-025.0	(22.5-27.5)	2.61	0.25	2.90	—	
M505-MW0036-035.0	(32.5-37.5)	2.11	0.44	15.69	—	UIP
M505-MW0037-010.0	(5.0-15.0)	5.92	0.38	0.0	—	
M505-MW0038-025.0	(22.5-27.5)					
M505-MW0039-032.5	(30.0-35.0)	4.69	4.92	0.0	—	
M505-MW0040-022.5	(20.0-25.0)	5.03	1.47	0.11	—	
M505-MW0041-025.0	(22.5-27.5)	rising	0.15	OFL	—	UIP
M505-MW0042-035.0	(32.5-37.5)	rising	1.69	OFL	—	UIP
M505-MW0043-027.5	(20.0-35.0)					
M505-MW0044-027.5	(20.0-35.0)	4.39	2.41	0.0	—	
M505-MW0045-034.5	(32.0-37.0)					
M505-MW0046-010.0	(5.0-15.0)					
M505-MW0047-027.5	(20.0-35.0)					
M505-MW0048-027.5	(20.0-35.0)	6.12	0.56	1.87	—	UIP
M505-MW0049-027.5	(20.0-35.0)					
M505-MW0050-010.0	(5.0-15.0)	8.11	7.40	4.89	—	
M505-MW0051-025.0	(22.5-27.5)	6.90	3.07	0.0	—	
M505-MW0052-010.0	(5.0-15.0)					
M505-MW0053-010.0	(5.0-15.0)	5.92	5.36	1.57	—	UIP
M505-MW0054-010.0	(5.0-15.0)	7.43	7.96	0.0	—	
M505-MW0055-025.0	(22.5-27.5)	7.05	3.39	0.0	—	
M505-MW0056-010.0	(5.0-15.0)					
M505-MW0057-025.0	(22.5-27.5)					
M505-MW0058-010.0	(5.0-15.0)					
M505-MW0059-025.0	(22.5-27.5)					

DATE: _____ Site Specific Operation and Maintenance Form Name: _____

NASA KSC FACILITY M7-505

WELL ID	S.I.	DTW	DO	PRESSURE	OVA-PID	NOTES
LETF-MW0001-025.0	(22.5-27.5)					
LETF-MW0002-025.0	(22.5-27.5					
LETF-MW0003-025.0	(22.5-27.5					
LETF-MW0004-035.0	(32.5-37.5)					
LETF-MW0005-025.0	(22.5-27.5					
LETF-MW0007-035.0	(32.5-37.5)					
LETF-MW0008-025.0	(22.5-27.5					
LETF-MW0009-025.0	(22.5-27.5					
LETF-MW0010-025.0	(22.5-27.5					
LETF-MW0011-025.0	(22.5-27.5					
PSB-MW0001-024.5	(22.0-27.0)					
PSB-MW0002-022.5	(20.0-25.0)					

NOTES:

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA M505			**Project Location:** KSC, FL
Date: 10/22/14	**Time:** 0920	**Conducted by:** Nick Fletcher	**Signature/Title:**
Client: NASA		**Client Contact:**	**Subcontractor companies:** None

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 O&M 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins

	Doc #		Doc #		Doc #
☐ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess the Risks** (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, trips) (L M H)	☒ Motion (i.e., traffic, moving water) (L M H)	☒ Mechanical (i.e., augers, motors) (L M H) blower
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H) wells	☒ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H) ground water	☒ Biological (i.e., ticks, poison ivy) (L M H) bugs, etc.	☒ Radiation (i.e., alpha, sun, laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H) system	☐ Personal (i.e. alone, night, not fit) (L M H)	☒ Driving (i.e. car, ATV, boat, dozer) (L M H) truck, van, car

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day). Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☐ Personal Hygiene	☐ Exposure Guidelines	☐ Decon Procedures
☐ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used ***(specify)***	☐ LPO conducted ***(specify job/JLA)***	☐ Traffic Control
☐	☐	☐ Other ***(specify)***
☐	☐	☐

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	I have read and understand the HASP
Nick Fletcher / Arcadis /	NF 0920		✓
Susan Sitkoff / Arcadis /	0922		✓
Mallory Art / Arcadis /	MA 830		✓

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to **STOP THE JOB,** I will perform **TRACK**; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain.)

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work Interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S issues:

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

11/24/14 NASA - M505

25,103 - 25,467

- 0630 in office. Met w/ Kevin. Had meeting w/ Scott.
- Gathered equipment and supplies. Loaded trucks. 0730 left for site.
- Picked up drum in Orlando.
- Aquired badges. 1030 on site. HTS meeting.
- Set up equipment, located wells allowed to let equilibrate.
- Collected round of water levels.
- Took .5 hour lunch
- Set up all calibrated meters.
- Set up on MW0055, purging began at 1348. Sampled at 1409, well purged good.
- MW-0052, purging began at 1424, Sampled at 1440, well purged good.
- MW-0051, Purging began at 1457, Sampled at 1513, well purged good.
- MW-0033 Purging began at 1531, Sampled at 1547, well purged good.
- MW0032, Purging began at 1557, Sampled at 1613, well purged good.
- MW0025, Purging began at 1637, Sampled at 1653, well purged good. →

1755

11/24/14 NASA-M505

- MW-0026 Purging began at 1702, Sampled at 1718, well purged good.
- Post Cal'd meters. Poured purge water to drum.
- Loaded trucks, Secured site
- off site at 1755
- Checked into Hotel at 1845
- Caught up on paperwork.

11/25/14 NASA-M-505 1 of

- 0700 Left for site. 0735 on site
- Heavy rain and lightning on arrival.
- Area under phase 2 lightning warning.
- 0850 rain stopped called NASA weather, still under phase-2 lightning.
- 0933 phase-2 lightning lifted
- Set up and calibrated equipment.
- Moved to MW-0035, purging began at 1014, Sampled at 1039, well purged good.
- MW0036, Purging began at 1041, Sampled at 1057, well purged good. →

11/25/14 NASA-M505

- MW-0049, Purging began at 1116, Sampled at 1133, Well purged good.
- Post Cal'd meters.
- Went through Samples w/ Kevin.
- Noticed all the vials that were Sampled Yesterday have bubbles. Called & spoke w/ ALS & Scott. We will send Samples.
- Changed oil in Compressor and cleaned site glass.
- Restarted System at 1355 in Zone-2 (Hand) Hour meter was 18665.8
- Went to drop Samples.
- Picked up Shipping Supplies.
- Packed and Shipped Samples.
- Returned to Collect readings for Zone-2 but lightning began Striking in area.
- Rain moved back in.
- Put System in Auto (Zone-1). Secured Site, off site at 1715

TE 014020.0003 / 14 Samples / 2 Otm

11/26/14 NASA-M505

- 0705 on base.
- Rain and heavy winds on arrival
- 0730 call'd NASA weather, no phase-2.
- Set up equipment, calibrated D.O. meter
- System was running on Zone-3. Balanced manifold and took System and well Readings.
- 0835 Switched to Zone-2.
- 0910 balanced manifold, took System and well readings.
- 1035 Switched to Zone-4
- 1105 balanced manifold, took System and well readings.
- Put System back in Auto (Zone-2)
- Cleaned trailer, Swept out.
- Poured used oil to empty Containers for Disposal.
- System running good. Secured site
- off site at 1320
- Back and unloaded at 1550. Turned in Paperwork

TH-8.8

NASA M505 Cape Canaveral, FL
11/24/14 KSK, DW

0630- Go over project with Scott Starr-
0730 Pack up equipment into trucks-

0730- Drive to Orlando Drum.
0930 Pickup (1) 55 gallon water drum.
1015 Badging station-
1030 Arrive onsite-
1030- Took water levels of
1200 the 18 wells to be sampled-
1200- Lunch on base-
1230

1230- Instrument calibration-
1300 and equipment preparation-
1300 Set up at MW 0013
Under camper unit-
1344- } purge well - MW 0013
1402 } Parameter 8260
1403 Sample M505 MW0013-25.5 20141124

1435- } Purge well MW 0039
1450 } Parameter 8260
1451 sample M505 MW0039-032.5 20141124

NASA M505 Cape Canaveral, FL
11/24/14 KSK, DW

1536 } Purge well MW0040
1551 } Parameters 8260
1552 Sample M505 MW0040-025.0 20141124

1600 } Purge well MW 0044
1615 } Parameters 8260
1616 Sample M505 MW 0044-027.5 20141124

1640 } Purge well MW 0041
1655 } Parameters 8260
1656 Sample M505 MW 0041-025.0 20141124

1719 } Purge well MW 0042
1734 } Parameters 8260
1735- Sample M505 MW 0042-035.0 20141124

1746- Post equipment calibration.
1754

1800 KSK offsite-

Hours for 11/24/14
0630 - 1800 = 11.5 hrs

NASA M505 Cape Canaveral, FL
11/25/14 KSK DW

0700 Leave hotel
0730- Arrive at site, heavy rain-
0930. lightining warning.
Unable to work-
0930 Warning cancelled.
0939-0948 Instrument calibration

1000 Set up at MW0023

1015-1030 Purge well MW0023

1031 Sample M505 MW0023-025.0 20141125

1050-1105 Purge well MW0024

1106 Sample M505 MW0024-035.0 20141125

1135-1144 Post instrument calibration-

1200 Put purge water into 55 gal drum-

NASA M505 Cape Canaveral, FL
11/25/14 KSK DW

1800-1300 Complete Chain of custody sheets for all samples-

1300 Bring all samples
1400 together and pack cooler

1400-1500 Bring sample cooler to shipping center

1600 Send UPS overnight-

1600-1700 Bad weather, unable to work.

1710 Called Peterson Rental and called off rental.

1715 KSK offsite and drive back to Tampa office

2015 Back at office.
Unpack equipment-

2030 - Copy notes

Hours 0730 - 2030 = 13 hrs

Viber

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 11/24/14 **Name:** David Welch

Name: Kevin Kearney

Zone	Well Location	Well ID	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM	
1	M505-MW0009S	M505-MW0009S-010.0				
1	M505-MW0009IS	M505-MW0009IS-025.5				
1	M505-MW0015	M505-MW0015-025.0		x	x	11/24/14
1	M505-MW0016	M505-MW0016-036.0		x	x	
1	M505-MW0043	M505-MW0043-027.5			x	
2	M505-MW0023	M505-MW0023-025.0	x	x	x	5.82 @ 1134
2	M505-MW0024	M505-MW0024-035.0	x	x	x	5.79 @ 1133
2	M505-MW0025	M505-MW0025-025.0	x	x	x	7.79 @ 1136
2	M505-MW0026	M505-MW0026-035.0	x	x	x	7.79 @ 1137
2	M505-MW0041	M505-MW0041-025.0	x	x	x	6.10 @ 1131
2	M505-MW0042	M505-MW0042-035.0	x	x	x	6.09 @ 1130
2	M505-MW0050	M505-MW0050-010.0		x	x	
2/4	M505-MW0037	M505-MW0037-010.0		x	x	
3	M505-MW0029	M505-MW0029-025.0			x	
3	M505-MW0032	M505-MW0032-025.0	x	x	x	7.98 @ 1136
3	M505-MW0033	M505-MW0033-025.0	x	x	x	7.88 @ 1135
3	M505-MW0051	M505-MW0051-025.0	x	x	x	6.86 @ 1139
3	M505-MW0052	M505-MW0052-010.0	x		x	7.03 @ 1140
3	M505-MW0053	M505-MW0053-010.0		x	x	
3	M505-MW0054	M505-MW0054-010.0		x	x	
3	M505-MW0055	M505-MW0055-025.0	x	x	x	6.94 @ 1142
4	M505-MW0004S	M505-MW0004S-009.0			x	
4	M505-MW0007S	M505-MW0007S-009.0		x		
4	M505-MW0007I	M505-MW0007I-030.0		x	x	
4	M505-MW0007D	M505-MW0007D-047.5				
4	M505-MW0010IS	M505-MW0010IS-025.5		x	x	
X 4	M505-MW0013IS	M505-MW0013IS-025.5	x	x	x	6.39 @ 1122
4	M505-MW0035	M505-MW0035-025.0	x	x	x	3.97 @ 1130
4	M505-MW0036	M505-MW0036-035.0	x	x	x	3.49 @ 1131
X 4	M505-MW0039	M505-MW0039-032.5	x	x	x	5.35 @ 1125
X 4	M505-MW0040	M505-MW0040-022.5	x	x	x	5.73 @ 1126

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 11/24/14

Name: David Welch

Name: Kevin Kearney

Zone	Well Location	Well ID	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM
4	M505-MW0044	M505-MW0044-027.5	x	x	x
4	M505-MW0049	M505-MW0049-027.5	x	x	x
None	M505-MW0001	M505-MW0001-020.0			
None	M505-MW0002	M505-MW0002-009.0			
None	M505-MW0003S	M505-MW0003S-009.0		x	x
None	M505-MW0003I	M505-MW0003I-030.0		x	x
None	M505-MW0006S	M505-MW0006-009.0			
None	M505-MW0006I	M505-MW0006-030.0			
None	M505-MW0008S	M505-MW0008S-009.0			
None	M505-MW0008I	M505-MW0008I-030.0			
None	M505-MW0011S	M505-MW0011S-010.0			
None	M505-MW0012	M505-MW0012-025.5			
None	M505-MW0014	M505-MW0014-009.0			
None	M505-MW0021	M505-MW0021-025.5			x
None	M505-MW0027	M505-MW0027-025.0			x
None	M505-MW0028	M505-MW0028-025.0			x
None	M505-MW0030	M505-MW0030-025.0			x
None	M505-MW0031	M505-MW0031-025.0			
None	M505-MW0034	M505-MW0034-025.0			
None	M505-MW0056	M505-MW0056-010.0			x
None	M505-MW0057	M505-MW0057-025.0			x
None	M505-MW0058	M505-MW0058-010.0			x
None	M505-MW0059	M505-MW0059-025.0			x

5.22 @ 1123
8.21 @ 1133

ARCADIS

Document Control Number: TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA - M505			**Project Location:** Cape Canaveral, FL
Date: 11/24/14	**Time:** 1040	**Conducted by:** David Weld	**Signature/Title:** Tech-5
Client: NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Locate wells 3 Sample wells 5 _____

2 Collect water levels 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: none

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☑ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's past activities) **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☑ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ All equipment checked & OK?
		☑ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **A**ssess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☑ Motion (i.e., traffic, moving water) (L (M) H)	☐ Mechanical (i.e., augers, motors) (L M H)	
☐ Electrical (i.e., utilities, lightning) (L M H)	☑ Pressure (i.e., gas cylinders, wells) (L (M) H)	☑ Environment (i.e., heat, cold, ice) (L (M) H)	
☑ Chemical (i.e., fuel, acid, paint) (L M H) Solvents	☑ Biological (i.e., ticks, poison ivy) (L (M) H) Snakes	☑ Radiation (i.e., alpha, sun, laser) (L M (H)	
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☑ Driving (i.e. car, ATV, boat, dozer) (L (M) H	

Continue TRACK Process on Page 2

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 11/26/14 | Time of Reading: 0748 | Arrival: 0710 | On ☑ | Off ☐

Name: DJL | Time of Reading: | Departure: 1310 | On ☑ | Off ☐

AS Hours: 18683.8

KW Hours:

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel				Pressure (PSI)							
Pre-cooler	X			Flow (SCFM)							
Post-cooler	X										
Blower Intake Filter (in-H2O)			inch-H2O								

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.2	23.0	19.2	Pressure (PSI)	/	/	18	15.5	16.0	17.0	17.0
Pre-cooler	X	30.0	160	Flow (SCFM)			2.0	3.0	3.0	<1	3.0
Post-cooler	X	28.5	—								
Blower Intake Filter (in-H2O)			inch-H2O								

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.8	23.0	19.5	Pressure (PSI)	17	16	22	23	19	20	17
Pre-cooler	X	29.5	165	Flow (SCFM)	3.0	3.0	3.0	3.0	3.0	3.2	3.0
Post-cooler	X	26.0	—								
Blower Intake Filter (in-H2O)			inch-H2O								

Re-adjusted manifold before these readings.

ZONE 4/ Solenoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.0	23.0	19.0	Pressure (PSI)	20	22	23	25	16	16	20
Pre-cooler	X	27	165	Flow (SCFM)	3.5	3	<1	<1	4	3.8	2.8
Post-cooler	X	26	—								
Blower Intake Filter (in-H2O)			inch-H2O								

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): | Timer minutes: | Time read:

Timer 2 (Solenoid 2): | Timer minutes: | Time read:

Timer 3 (Solenoid 4): | Timer minutes: | Time read:

Notes:

AS-1 through AS-10 have been shut down

System shut-down on 11/21/14 at 1003 for sampling

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 11/26/14 **Name:** David Welch

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5				-	Artesian
1	M505-MW0016-036.0	33.5 - 38.5				-	Artesian
2	M505-MW0023-025.0	22.5 - 27.5	3.83	0.82	2.6	-	
2	M505-MW0024-035.0	32.5 - 37.5	2.1	8.08	14.7	-	⊗
2	M505-MW0025-025.0	22.5 - 27.5	5.22	3.11 2.27	0.7	-	
2	M505-MW0026-035.0	32.5 - 37.5	5.50		0.0	-	
2	M505-MW0041-025.0	22.5 - 27.5	4.45	3.21	0.0	-	
2	M505-MW0042-035.0	32.5 - 37.5	4.48	1.93	1.1	-	
2	M505-MW0050-010.0	5.0 - 15.0	5.72	7.07	2.5	-	⊗
2/4	M505-MW0037-010.0	5.0 - 15.0	4.69	1.79	0.0	-	
3	M505-MW0032-025.0	32.5 - 37.5				-	Artesian
3	M505-MW0033-025.0	22.5 - 27.5	6.52	4.50	2.2	-	
3	M505-MW0051-025.0	22.5 - 27.5	5.35	3.51	1.9	-	
3	M505-MW0053-010.0	5.0 - 15.0	2.36	7.41	13.6	-	⊗
3	M505-MW0054-010.0	5.0 - 15.0	1.80	8.90	0.7	-	⊗
3	M505-MW0055-025.0	22.5 - 27.5	4.31	5.22	0.0	-	

⊗ = Bubbling on well.

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 11/26/14 **Name:** David Welch

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	3.40	0.93	0.0	-	
4	M505-MW0007I-030.0	25 - 35	3.83	3.40	0.7	-	
4	M505-MW0010IS-025.5	23 - 28	3.99	0.58	1.5	-	
4	M505-MW0013IS-025.5	23 - 28	3.42	3.38	0.0	-	
4	M505-MW0035-025.0	22.5 - 27.5	2.61	2.98	1.3	-	
4	M505-MW0036-035.0	32.5 - 37.5				-	Artesian
4	M505-MW0039-032.5	30 - 35	2.39	5.63	0.0	-	
4	M505-MW0040-022.5	22.5 - 27.5	3.27	1.72	0.0	-	
4	M505-MW0044-027.5	20 - 35	3.30	2.78	0.0	-	
4	M505-MW0049-027.5	20 - 35	6.15	3.09	0.0	-	
None	M505-MW0003S-009.0	4 - 14	5.38	0.47	0.0	-	Replaced well plug + well ID
None	M505-MW0003I-030.0	25 - 35	4.95	0.59	0.0	-	

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 12/29/14 Time of Reading: 0954 Arrival: On [X] Off [ ]

Name: NDF, ZTV Time of Reading: Departure: 1458 On [X] Off [ ]

AS Hours: 194779

KW Hours: 172835

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	6.3	23.0	22.2	Pressure (PSI)	/	/	/	/	/	/	/
Pre-cooler	X	27	170	Flow (SCFM)	/	/	/	/	/	/	/
Post-cooler	X	25	—								
Blower Intake Filter (in-H2O)	0	inch-H2O									

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.4	23.0	23.8	Pressure (PSI)	/	/	13	13	13	13	12
Pre-cooler	X	31	170	Flow (SCFM)	/	/	0	2	1-5	0	1-2
Post-cooler	X	30	—								
Blower Intake Filter (in-H2O)	0	inch-H2O									

ZONE 3/ Solonoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.3	23.0	22.2	Pressure (PSI)	13	13	22	21	18	14	12
Pre-cooler	X	27	170	Flow (SCFM)	3	2.8	0.5	4.4	3.4	3	3
Post-cooler	X	25	—								
Blower Intake Filter (in-H2O)	0	inch-H2O									

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.6	23	24.7	Pressure (PSI)	16	22	28	29	10	17	18
Pre-cooler	X	29	175	Flow (SCFM)	2.6	3.2	<1	<1	3.0	2.5	2.2
Post-cooler	X	28	—								
Blower Intake Filter (in-H2O)	0	inch-H2O									

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): Timer minutes: 176 Time read: 0955

Timer 2 (Solenoid 2): Timer minutes: Time read:

Timer 3 (Solenoid 4): Timer minutes: Time read:

Notes:

AS-1 through AS-10 have been shut down

1044 switch to solenoid 2

1250 switch to solenoid 4

AS-25 open minimal flow observed (<1)

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 12/29/14

Name: NDF

Name: ZTV

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (In-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	5.69	3.51	0.88	-	
1	M505-MW0016-036.0	33.5 - 38.5	5.61	2.57	0.14	-	
2	M505-MW0023-025.0	22.5 - 27.5	5.66	0.01	~~7.64~~ 0.40 NM	-	Pressure=0.40
2	M505-MW0024-035.0	32.5 - 37.5	6.39	2.27	7.64	-	
2	M505-MW0025-025.0	22.5 - 27.5	7.88	4.05	0.11	-	
2	M505-MW0026-035.0	32.5 - 37.5	7.77	2.86	0.49	-	
2	M505-MW0041-025.0	22.5 - 27.5	5.90	1.93	0.26	-	
2	M505-MW0042-035.0	32.5 - 37.5	5.89	2.32	2.83	-	
2	M505-MW0050-010.0	5.0 - 15.0	~~5.90~~ 8.39 NM	6.41	0.14	-	DTW=8.39
2/4	M505-MW0037-010.0	5.0 - 15.0	5.90	0	0	-	
3	M505-MW0032-025.0	32.5 - 37.5	—	—	—	-	ARTESIAN
3	M505-MW0033-025.0	22.5 - 27.5	7.62	0.01	0.26	-	
3	M505-MW0051-025.0	22.5 - 27.5	6.33	3.22	0.33	-	
3	M505-MW0053-010.0	5.0 - 15.0	4.35	7.65	OFL	-	
3	M505-MW0054-010.0	5.0 - 15.0	5.93	7.76	4.06	-	
3	M505-MW0055-025.0	22.5 - 27.5	6.33	4.38	0	-	

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 12/29/14

Name: NDF

Name: ZTV

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.07	0	0	-	
4	M505-MW0007I-030.0	25 - 35	4.98	3.96	0.23	-	
4	M505-MW0010IS-025.5	23 - 28	5.25	4.31	327	-	
4	M505-MW0013IS-025.5	23 - 28	5.17	6.08	0	-	
4	M505-MW0035-025.0	22.5 - 27.5	3.71	1.40	0.18	-	
4	M505-MW0036-035.0	32.5 - 37.5	3.39	1.33	0	-	
4	M505-MW0039-032.5	30 - 35	4.17	4.94	0.46	-	
4	M505-MW0040-022.5	22.5 - 27.5	4.45	0.69	0	-	
4	M505-MW0044-027.5	20 - 35	4.39	0.72	0.14	-	
4	M505-MW0049-027.5	20 - 35	—	—	—	-	WASPS
None	M505-MW0003S-009.0	4 - 14	5.97	0.01	0	-	
None	M505-MW0003I-030.0	25 - 35	6.30	0.00	-3.12	-	

12-29-14

NASA TL014020.0001

Kennedy Space Center, FL

ARCADIS - Zack Vail & Nick Fletcher

Biosparge system O&M

0700 - Arrive @ office / load vehicle

0720 - Depart for site

0925 - Arrive @ badging station

0940 - Arrive @ M505 / TGS meeting

0954 - Collect O&M reading for Zone 3 (ON upon arrival)

1044 - Switch to Zone 2 ON

1150 - Collect Zone 2 O&M readings

1250 - Switch to Zone 4 ON

1355 - Collect Zone 4 O&M readings

1450 - Resume normal system operation in Zone 3 (220 elapsed minutes of 240)

1458 - Depart M505

1510 - Depart base for office

1705 - Arrive @ office

1715 - End of day

12-29-14

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 1/19/15 Time of Reading: 1030 Arrival: 1020 On ☑ Off ☐

Name: DJW Time of Reading: 1650 Departure: 1650 On ☐ Off ☐

AS Hours: 19975.8

KW Hours: 177815

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel				Pressure (PSI)							
Pre-cooler	X			Flow (SCFM)							
Post-cooler	X										
Blower Intake Filter (in-H2O)			inch-H2O								

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.7	23.0	19.8	Pressure (PSI)	0	0	15	13	13	15	14
Pre-cooler	X	30	16.0	Flow (SCFM)	0	0	~1.3	3.2	2.8	<1	4.2
Post-cooler	X	29	32								
Blower Intake Filter (in-H2O)	~1		inch-H2O								

ZONE 3/ Solonoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.7	23.0	21.6	Pressure (PSI)	11	14	~23	22	21	20	13.5
Pre-cooler	X	28.0	16.5	Flow (SCFM)	0	0	~1.2	~1.2	2.2	3.9	1.9
Post-cooler	X	27.5	32								
Blower Intake Filter (in-H2O)	~1		inch-H2O								

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.4	23.0	22.0	Pressure (PSI)	16	22	29	30	5	16	18
Pre-cooler	X	32	16.0	Flow (SCFM)	2.0	2.0	<1	<1	2.0	2.0	2.0
Post-cooler	X	29	32								
Blower Intake Filter (in-H2O)	~1		inch-H2O								

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): Timer minutes: 240 (Hand) Time read: 1302

Timer 2 (Solenoid 2): Timer minutes: 132 Time read: 1036

Timer 3 (Solenoid 4): Timer minutes: 240 (Hand) Time read: 1445

Notes:

AS-1 through AS-10 have been shut down

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 1/19/15 **Name:** David Welch

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	6.35	4.60	0.0	-	
1	M505-MW0016-036.0	33.5 - 38.5	6.12	5.25	0.0	-	
2	M505-MW0023-025.0	22.5 - 27.5	~~7.65~~	1.78	0.0	-	5.95 DTL
2	M505-MW0024-035.0	32.5 - 37.5	~~7.65~~	3.06	8.84	-	6.00 DTL / med Bubbling
2	M505-MW0025-025.0	22.5 - 27.5	7.65	4.36	0.0	-	
2	M505-MW0026-035.0	32.5 - 37.5	7.65	4.44	0.0	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.05	2.26	0.13	-	
2	M505-MW0042-035.0	32.5 - 37.5	6.08	2.83	0.0	-	
2	M505-MW0050-010.0	5.0 - 15.0	5.98	7.98	9.18	-	Heavy Bubbling
~~2~~ 4 ⊗	M505-MW0037-010.0	5.0 - 15.0	5.91	0.78	0.0	-	
3	M505-MW0032-025.0	32.5 - 37.5	—	—	—	-	Short Circuit to TOC
3	M505-MW0033-025.0	22.5 - 27.5	7.56	0.44	0.0	-	Plug under Pressure
3	M505-MW0051-025.0	22.5 - 27.5	6.33	4.96	0.0	-	
3	M505-MW0053-010.0	5.0 - 15.0	—	8.56	3.97	-	Bubble to ~3" from TOC
3	M505-MW0054-010.0	5.0 - 15.0	3.31	8.63	5.20	-	Heavy Bubbling
3	M505-MW0055-025.0	22.5 - 27.5	6.60	5.36	0.0	-	

⊗ M505-MW0037 (on Zone-4) 5.99 1.16 0.0

1/19/15 NASA-M505

28,065 – 28,320

- 0740, truck walk around, gathered equipment
- 0800 left for site. 1005 arrive at balsing station. Aquired base.
- System running on arrival Zone-2.
- Calibrated D.O. meter. Took System and well readings.
- 1215 switched to Zone-1,3 in Hand.
- 1300 Took System and well readings for Zone-3.
- 1404 switched to Zone-4 in Hand.
- 1445 took Zone-4 system readings and well Readings.
- All Zones running good.
- Turned Flows up in Zone-4 wells to ~4 SCFM.
- Put system back in Auto.
- Post Cal'd D.O. meter.
- Loaded truck off base at 1650.
- Back and unloaded at 1900.

TBH - (11.4)

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 1/19/15 **Name:** David Welch

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.21	0.82	0.0	-	
4	M505-MW0007I-030.0	25 - 35	4.51	4.32	0.11	-	
4	M505-MW0010IS-025.5	23 - 28	4.68	[illegible]	2.44	-	4.47 D.O.
4	M505-MW0013IS-025.5	23 - 28	4.68	6.98	6.13	-	
4	M505-MW0035-025.0	22.5 - 27.5	3.71	4.28	0.12	-	
4	M505-MW0036-035.0	32.5 - 37.5	3.54	1.33	0.0	-	
4	M505-MW0039-032.5	30 - 35	3.56	6.08	0.0	-	
4	M505-MW0040-022.5	22.5 - 27.5	4.08	1.07	0.0	-	
4	M505-MW0044-027.5	20 - 35	3.92	6.05	3.81	-	Medium Bubbling
4	M505-MW0049-027.5	20 - 35	6.74	1.34	0.0	-	
None	M505-MW0003S-009.0	4 - 14	6.01	1.05	0.0	-	
None	M505-MW0003I-030.0	25 - 35	6.06	0.92	0.0	-	

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI-55 **INSTRUMENT #** 13A 102423

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 100% ambient air

Standard B _____

Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/01/19	1102	A	100%	99.8	0.2	Y	Init	DJL
" "	1635	A	100%	91.7	8.3	N	Cont	DJL

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows. xxxxxxxx.xxxx.xxxxx - dd/mm/year*

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA-M505			**Project Location:** Cape Canaveral, FL.
Date: 1/19/15	**Time:** 1025	**Conducted by:** David Welch	**Signature/Title:** Tech-5
Client: NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:** ___

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Inspect System
2 Conduct monthly OTM
3
4
5
6

Other Hazardous Activities - Check the box if there are any other ARCADIS, client or other activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: none

If yes, describe them here: _____

How will they be controlled? _____

Permits - Check applicable boxes to determine what permits must be issued or completed as a prerequisite or complement to the checklist or activity before work begins

	Doc #		Doc #		Doc #
☑ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions prior to commencing work. Check all that apply

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☑ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ All equipment checked & OK?
		☑ Staff knows gathering points?

Comments: _____

Review the hazards (Check all those that are discussed) Examples are provided and Assess the risks (Low, Medium, High) - Provide all crew members with an opportunity to be acquainted with any and all hazards

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☑ Motion (i.e., traffic, moving water) (L M H)	☑ Mechanical (i.e., augers, motors) (L M H)
☑ Electrical (i.e., utilities, lightning) Panel (L M H)	☑ Pressure (i.e., gas cylinders, wells) (L M H)	☑ Environment (i.e., heat, cold, ice) (L M H)
☐ Chemical (i.e., fuel, acid, paint) (L M H)	☑ Biological (i.e., ticks, poison ivy) Snakes, Insects (L M H)	☑ Radiation (i.e., alpha, sun, laser) (L M H)
☑ Sound (i.e., machinery, generators) Blower (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☑ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

STOP WORK AUTHORITY (Must be addressed in every Tailgate meeting - (*See statements below*)

Elimination	Substitution	Isolation
Engineering controls	Administrative controls	✓ Monitoring
✓ General PPE Usage	✓ Hearing Conservation	Respiratory Protection
✓ Personal Hygiene	Exposure Guidelines	Decon Procedures
Emergency Action Plan (EAP)	Fall Protection	✓ Work Zones/Site Control
JLA to be developed/used *(specify)*	LPO conducted *(specify job/JLA)*	Traffic Control
		Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature					
Dan Weld	AES	[signature]	D.L./10/10		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500.

Visitor Records - not employed by AES

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK, and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check if/as applicable and explain)

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S issues:

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 2/25/15 Time of Reading: 0835 Arrival: ~~18~~ 7897 On ☑ Off ☐

Name: Dave D, DAVEW Time of Reading: _____ Departure: On ☑ Off ☐

AS Hours: 20714.8

KW Hours: 184897

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	~~6.3~~	~~23.0~~	~~19.8~~	Pressure (PSI)	–	–	–	–	–	–	–
Pre-cooler	X	–	–	Flow (SCFM)	–	–	–	–	–	–	–
Post-cooler	X	–	–								
Blower Intake Filter (in-H2O)	– inch-H2O										

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.3	23.0	19.8	Pressure (PSI)	–	–	–	13	13	13	12
Pre-cooler	X	31.0	160°F	Flow (SCFM)	–	–	–	2.5	2.0	0.0	0.0
Post-cooler	X	32.0	N/A*	* NOT working							
Blower Intake Filter (in-H2O)	1.0 inch-H2O										

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.3	23.0	20.5	Pressure (PSI)	18	16.0	25	24	23	16	16
Pre-cooler	X	26	165°F	Flow (SCFM)	2.9	2.8	2.0 (B)	1.4 (B)	2.5	3.2	3.2
Post-cooler	X	26	N/A*	* not working.							
Blower Intake Filter (in-H2O)	1.0 inch-H2O										

(B) = Bouncing.

ZONE 4/ Solenoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.2	23.0	20.9	Pressure (PSI)	16	20	25	26	16	18	18
Pre-cooler	X	23	165	Flow (SCFM)	3.9	3.9	1.2 (B)	1.2 (B)	3.7	3.9	4.0
Post-cooler	X	24	N/A*	* not working.							
Blower Intake Filter (in-H2O)	1.0 inch-H2O										

As 24+25 @ 0 w/ occasional Jump

B = bouncing.

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): ~~20~~ 240 Timer minutes: 20 Time read: ~~0950~~ 1020

Timer 2 (Solenoid 2): ~~48~~ 240 Timer minutes: 48 Time read: 0940

Timer 3 (Solenoid 4): ~~20~~ 240 Timer minutes: 20 Time read: 1020

Notes:

AS-1 through AS-10 have been shut down

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 2/25/15 **Name:** David D.

Name: David W.

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	**M505-MW0007S-009.0**	**4.0 - 14.0**	5.13	0.67	0.0	-	
4	M505-MW0007I-030.0	25 - 35	4.54	4.52	+0.62	-	
4	M505-MW0010IS-025.5	23 - 28	4.67 (R)	5.22	+0.78	-	
4	M505-MW0013IS-025.5 ✓	23 - 28	4.46	8.19	+0.13	-	under camper
4	M505-MW0035-025.0	22.5 - 27.5	2.88	4.82	0.0	-	
4	M505-MW0036-035.0	32.5 - 37.5	3.04	1.70	+.13	-	
4	M505-MW0039-032.5 ✓	30 - 35	ARTESIAN			-	UHP
4	M505-MW0040-025.0 ✓	22.5 - 27.5	4.23	3.55	0.00	-	
4	M505-MW0044-027.5	20 - 35	4.06	6.99	+0.72	-	
4	M505-MW0049-027.5	20 - 35	6.19	1.34	0.0	-	
None	M505-MW0003S-009.0	4 - 14	5.99	0.63	0.0	-	
None	M505-MW0003I-030.0	25 - 35	6.35	0.99	0.0	-	

(R) water table rising

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 2/25/15 **Name:** David D.

Name: David W.

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	5.39	4.26	0.0	-	
1	M505-MW0016-036.0	33.5 - 38.5	5.11	5.17	0.0	-	
2	M505-MW0023-025.0	22.5 - 27.5	5.17	3.57	0.0	-	
2	M505-MW0024-035.0	32.5 - 37.5	5.19	2.57	0.0	-	
2	M505-MW0025-025.0	22.5 - 27.5	7.43	4.30	0.0	-	
2	M505-MW0026-035.0	32.5 - 37.5	7.61	4.09	0.0	-	
2	M505-MW0041-025.0	22.5 - 27.5	5.65	3.06	0.0	-	
2	M505-MW0042-035.0	32.5 - 37.5	5.71	3.93	0.0	-	
2	M505-MW0050-010.0	5.0 - 15.0	7.95 (B)	6.37	+0.21	-	Bubbling
2/4	M505-MW0037-010.0	5.0 - 15.0	5.88	0.54	0.0	-	
3	M505-MW0032-025.0	32.5 - 37.5	Artesian		>+20	-	UHP
3	M505-MW0033-025.0	22.5 - 27.5	5.83	4.35	+0.19	-	
3	M505-MW0051-025.0	22.5 - 27.5	5.40	5.02	+0.16	-	
3	M505-MW0053-010.0	5.0 - 15.0	Artesian		-	-	UHP
3	M505-MW0054-010.0	5.0 - 15.0	Artesian		?	-	UIP (B)
3	M505-MW0055-025.0	22.5 - 27.5	6.24	4.75	0.0	-	

UHP = under high pressure
UIP = under initial pressure
(B) = bubbling

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 2/24/15 **Name:** DAVID

Name: DREW.

Zone	Well Location	Well ID	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM
1	M505-MW0009S	M505-MW0009S-010.0			
1	M505-MW0009IS	M505-MW0009IS-025.5			
1	M505-MW0015	M505-MW0015-025.0		X	X
1	M505-MW0016	M505-MW0016-036.0		X	X
1	M505-MW0043	M505-MW0043-027.5			X
2	M505-MW0023	M505-MW0023-025.0	X	X	X
2	M505-MW0024	M505-MW0024-035.0	X	X	X
2	M505-MW0025	M505-MW0025-025.0	X	X	X
2	M505-MW0026	M505-MW0026-035.0	X	X	X
2	M505-MW0041	M505-MW0041-025.0	X	X	X
2	M505-MW0042	M505-MW0042-035.0	X	X	X
2	M505-MW0050	M505-MW0050-010.0		X	X
2/4	M505-MW0037	M505-MW0037-010.0		X	X
3	M505-MW0029	M505-MW0029-025.0			X
3	M505-MW0032	M505-MW0032-025.0	X	X	X
3	M505-MW0033	M505-MW0033-025.0	X	X	X
3	M505-MW0051	M505-MW0051-025.0	X	X	X
3	M505-MW0052	M505-MW0052-010.0	X		X
3	M505-MW0053	M505-MW0053-010.0		X	X
3	M505-MW0054	M505-MW0054-010.0		X	X
3	M505-MW0055	M505-MW0055-025.0	X	X	X
4	M505-MW0004S	M505-MW0004S-009.0			X
4	M505-MW0007S	M505-MW0007S-009.0		X	
4	M505-MW0007I	M505-MW0007I-030.0		X	X
4	M505-MW0007D	M505-MW0007D-047.5			
4	M505-MW0010IS	M505-MW0010IS-025.5		X	X
4	M505-MW0013IS	M505-MW0013IS-025.5	(X)	X	X
4	M505-MW0035	M505-MW0035-025.0	X	X	X
4	M505-MW0036	M505-MW0036-035.0	X	X	X
4	M505-MW0039	M505-MW0039-032.5	X	X	X
4	M505-MW0040	M505-MW0040-022.5	X	X	X

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: _____ **Name:** _____

Name: _____

Zone	Well Location	Well ID	Quarterly Sampling During Operation	Air Sparge Performance Monitoring	Annual LTM
4	M505-MW0044	M505-MW0044-027.5	X	X	X
4	M505-MW0049	M505-MW0049-027.5	X	X	X
None	M505-MW0001	M505-MW0001-020.0			
None	M505-MW0002	M505-MW0002-009.0			
None	M505-MW0003S	M505-MW0003S-009.0		X	X
None	M505-MW0003I	M505-MW0003I-030.0		X	X
None	M505-MW0006S	M505-MW0006-009.0			
None	M505-MW0006I	M505-MW0006-030.0			
None	M505-MW0008S	M505-MW0008S-009.0			
None	M505-MW0008I	M505-MW0008I-030.0			
None	M505-MW0011S	M505-MW0011S-010.0			
None	M505-MW0012	M505-MW0012-025.5			
None	M505-MW0014	M505-MW0014-009.0			
None	M505-MW0021	M505-MW0021-025.5			X
None	M505-MW0027	M505-MW0027-025.0			X
None	M505-MW0028	M505-MW0028-025.0			X
None	M505-MW0030	M505-MW0030-025.0			X
None	M505-MW0031	M505-MW0031-025.0			
None	M505-MW0034	M505-MW0034-025.0			
None	M505-MW0056	M505-MW0056-010.0			X
None	M505-MW0057	M505-MW0057-025.0			X
None	M505-MW0058	M505-MW0058-010.0			X
None	M505-MW0059	M505-MW0059-025.0			X

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 3/17/15 Time of Reading: 1040 Arrival: 3/17/15 On ☒ Off ☐

Name: David Dankert Time of Reading: 1700 Departure: 3/17/15 On ☒ Off ☐

AS Hours: 21,195.9

KW Hours: 18,986.4

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	6.4	23.0	25.2	Pressure (PSI)	–	–	–	–	–	–	–
Pre-cooler	X	-	-	Flow (SCFM)	–	–	–	–	–	–	–
Post-cooler	X	–	-	N/A							
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.6	23.0	24.9	Pressure (PSI)	–	–	–	12	12	13	11
Pre-cooler	X	33	175	Flow (SCFM)	–	–	–	2.2	1.7	<1	1.3
Post-cooler	X	32	– *	post cooler Temp not working. * Bouncing							
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 3/ Solonoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.4	23.0	23.2	Pressure (PSI)	14.0	13	20.0	19.5	17.0	14.0	14.0
Pre-cooler	X	27.0	175	Flow (SCFM)	2.0	2.0	2.6 (B)	4.9	4.7	2.6	2.7
Post-cooler	X	26.0	– *	– * post Temp gauge not working (B) = Bouncing.							
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.7	23.0	25.4	Pressure (PSI)	16	22	26	28	10	26	20
Pre-cooler	X	27	180	Flow (SCFM)	3.1	3.2	2.0 (B)	0	3.2	1.9 (B)	2.8
Post-cooler	X	26.5	– *	– * not working. (B) = Bouncing.							
Blower Intake Filter (in-H2O)	<1 inch-H2O										

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): Timer minutes: 183 Time read: ~1040

Timer 2 (Solenoid 2): Timer minutes: ~55 Time read: 1245

Timer 3 (Solenoid 4): Timer minutes: ~35 Time read: 1429

Notes:

AS-1 through AS-10 have been shut down

System in Zone 2 @ Arrival @ 183 min (sol 3) Sol 2 off @ trailer

* Zone placed in manual operation for 05m

Switched Panel to Zone II @ 1152

Switched to Zone IV @ 1356

cleaned cooling fan radiator fins

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 3/17/15

Name: David Dankel

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.44	0.38	0.0	-	
4	M505-MW0007I-030.0	25 - 35	5.60	3.06	+0.18	-	
4	M505-MW0010IS-025.5	23 - 28	5.70	5.37	+0.29	-	
4	M505-MW0013IS-025.5	23 - 28	5.95	6.93	0.0	-	
4	M505-MW0035-025.0	22.5 - 27.5	4.30	2.75	0.0	-	
4	M505-MW0036-035.0	32.5 - 37.5	3.39	0.75	0.0	-	
4	M505-MW0039-032.5	30 - 35	4.75	5.85	+0.14	-	
4	M505-MW0040-022.5	22.5 - 27.5	5.27	0.25	0.0	-	
4	M505-MW0044-027.5	20 - 35	4.19	8.19	+1.00	-	Bubbling
4	M505-MW0049-027.5	20 - 35	8.17	1.13	0.0	-	
None	M505-MW0003S-009.0	4 - 14	6.25	0.16	0.0	-	
None	M505-MW0003I-030.0	25 - 35	7.17	0.19	0.0	-	

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 3/17/15 **Name:** David Dankel

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (In-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	6.30	5.78	+0.19	-	UHP
1	M505-MW0016-036.0	33.5 - 38.5	ARTESIAN			-	opened well + verified UHP
2	M505-MW0023-025.0	22.5 - 27.5	5.92	3.12	0.0	-	
2	M505-MW0024-035.0	32.5 - 37.5	6.03	1.08	0.0	-	
2	M505-MW0025-025.0	22.5 - 27.5	8.08	4.33	0.0	-	
2	M505-MW0026-035.0	32.5 - 37.5	8.28	3.46	0.0	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.61	0.72	0.0	-	UIP
2	M505-MW0042-035.0	32.5 - 37.5	6.71	3.21	0.0	-	
2	M505-MW0050-010.0	5.0 - 15.0	8.26	7.40	0.0	-	Bubbling.
2/4	M505-MW0037-010.0	5.0 - 15.0	6.05	0.18	0.0	-	
3	M505-MW0032-025.0	32.5 - 37.5	3.14	4.44	+20	-	UHP - Bubbling
3	M505-MW0033-025.0	22.5 - 27.5	7.26	1.21	+0.61	-	UIP
3	M505-MW0051-025.0	22.5 - 27.5	6.46	3.73	0.0	-	
3	M505-MW0053-010.0	5.0 - 15.0	4.51	9.14	42.83	-	UIP - Bubbling.
3	M505-MW0054-010.0	5.0 - 15.0	5.04	9.17	+0.74	-	Bubbling.
3	M505-MW0055-025.0	22.5 - 27.5	7.36	4.52	0.0	-	

UIP = Under Initial Pressure

UHP = Under High Pressure

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

YSI

Company: Arcadis
Contact: David Dankerl
Phone #: #N/A

Order No.: RR97044
Date: 3/16/2015
Technician: EM

Packing List

Item	Serial Number	Tech	QC
550A	0	✓	
Handheld Display	03J0872AA	✓	

Item	Tech	QC	Item	Tech	QC
Cable 50'	✓		AC Adaptor		
Flow Cell			Stand		
Barb Kit			D.O Kit	✓	
Storage / Cal Cup			Calibration Kit		
Sensor Guard	✓				
Manual					
Sonde Cap					
Software					
Extra Batteries	✓				
Display Comm. Cable					
Sonde Comm. Cable					

Calibration Report

550A			0	
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)			150223C
pH 7 Buffer	(+/- .2)			141125C
pH mV for 7 Buffer	(0 +/- 50)			
pH 4 Buffer	(+/- .2)			141125B
pH mV for 4 Buffer	(180 +/- 50)			
pH 10 Buffer	(+/- .2)			#REF!
pH mV for 10 Buffer	(-180 +/- 50)			
ORP mV, 237.5	(+/- 20 mV)			141125D
DO 100% Sat	(+/- 2%)	97.9%	99.9%	
0% DO Check	(+/- 2%)		1.80	PS1
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

3/17/15 Postcal'd @ 98.9%
16:50 DJO

3/17/15 NASA M505 -DJD

0800 Mob to site (System on)
1015 on site, setup, safety meeting
1030 START O+M, SYSTEM in Zone III
1040 • Take readings in Zone III
1152 Switched system to Zone II
1245 • Take readings in Zone II
1356 Switched system to Zone III
1430 • Take readings in Zone IV
1600 Zone IV Completed
• Turned system off to clean cooling fan radiator fins
1645 Radiator cleaned - Turned SYSTEM TO ON (AUTO) SYSTEM ON ✓
1700 off base

(9)

3/18/15 NASA - Press Site -DJD

0800 on base 0815 Press site
0830 Utility locators onsite
• permit signed ✓
0930 offsite
1230 EOD

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 4/21/15 Time of Reading: Arrival: 1034 On ☒ Off ☐

Name: D. DANIELS Time of Reading: Departure: 1545 On ☒ Off ☐

AS Hours: 22,035.1

KW Hours: 198663

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp
Panel			
Pre-cooler			
Post-cooler			
Blower Intake Filter (in-H2O)			inch-H2O

Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Pressure (PSI)	—	—	—	—	—	—	—
Flow (SCFM)	—	—	—	—	—	—	—

ZONE 1 off line

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp
Panel	6.6	23.0	23.5
Pre-cooler		35	160
Post-cooler		34	N/A
Blower Intake Filter (in-H2O)	<1 or Ø		inch-H2O

Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Pressure (PSI)	—	—	—	13	13	17	12
Flow (SCFM)	—	—	—	2.9	2.2	0	0

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp
Panel	6.5	23.0	24.3
Pre-cooler		29	180°F
Post-cooler		27	N/A
Blower Intake Filter (in-H2O)	<1 or Ø		inch-H2O

Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Pressure (PSI)	12	12	21	21	20	19	15
Flow (SCFM)	2.0	2.5	1.6 (B)	<1 (B)	2.8	5.4	4.9

(B) = Bouncing.

ZONE 4/ Solenoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp
Panel	6.9	23.0	25.0
Pre-cooler		35	160
Post-cooler		33	
Blower Intake Filter (in-H2O)	<1 or Ø		inch-H2O

Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Pressure (PSI)	16	20	28	30	14	30	22
Flow (SCFM)	3.0	2.7	0.0	0	3.5	0	2.5

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3):	Timer minutes: 34	Time read: 12:35
Timer 2 (Solenoid 2):	Timer minutes: 113	Time read: 10:35
Timer 3 (Solenoid 4):	Timer minutes: 30	Time read: 1350

Notes:

AS-1 through AS-10 have been shut down 113 min in Zone II @ Arrival
Switched to Zone 3 @ 17:00 (MANUAL)
Switched to Zone 4 @ 1350 (MANUAL)
1530 All zones complete — SYSTEM IN AUTO
1545 Offsite

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: D. DANKERT 4/21/15 **Name:** D. DANKERT

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	6.34	3.34	~~0~~	-	UHP
1	M505-MW0016-036.0	33.5 - 38.5	6.15	3.50	~~0~~	-	AP was off
2	M505-MW0023-025.0	22.5 - 27.5	6.43	2.09	~~0~~	-	
2	M505-MW0024-035.0	32.5 - 37.5	6.46	3.67	~~0~~	-	
2	M505-MW0025-025.0	22.5 - 27.5	8.25	2.27	~~0~~	-	
2	M505-MW0026-035.0	32.5 - 37.5	8.63	1.97	0	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.65	1.41	+0.18	-	UIP
2	M505-MW0042-035.0	32.5 - 37.5	6.67	2.02	+1.41	-	UIP
2	M505-MW0050-010.0	5.0 - 15.0	8.53	3.15	+0.24	-	UIP
2/4	M505-MW0037-010.0	5.0 - 15.0	6.35	0.16	~~0~~	-	
3	M505-MW0032-025.0	32.5 - 37.5	ARTESIAN			-	UHP
3	M505-MW0033-025.0	22.5 - 27.5	7.10	7.37	+1.03	-	UHP
3	M505-MW0051-025.0	22.5 - 27.5	6.55	2.50	~~0~~	-	
3	M505-MW0053-010.0	5.0 - 15.0	ARTESIAN			-	UIP
3	M505-MW0054-010.0	5.0 - 15.0	2.35	7.55	+20	-	Bubbling UHP
3	M505-MW0055-025.0	22.5 - 27.5	6.02	2.78	~~0~~	-	

UIP = Under initial pressure
UHP = Under High pressure

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 4/21/15 **Name:** D. DanKevl

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.23	0.58	Ø	-	
4	M505-MW0007I-030.0	25 - 35	5.76	0.96	+0.18	-	
4	M505-MW0010IS-025.5	23 - 28	5.90	2.55	+0.18	-	
4	M505-MW0013IS-025.5	23 - 28	6.17	5.08	Ø	-	under RV
4	M505-MW0035-025.0	22.5 - 27.5	4.46	1.13	Ø	-	
4	M505-MW0036-035.0	32.5 - 37.5	4.15	0.58	Ø	-	
4	M505-MW0039-032.5	30 - 35	5.02	2.53	+0.20	-	
4	M505-MW0040-022.5	22.5 - 27.5	5.60	0.55	Ø	-	
4	M505-MW0044-027.5	20 - 35	5.22	3.66	+0.15	-	Bubbling.
4	M505-MW0049-027.5	20 - 35	8.70	1.32	Ø	-	
None	M505-MW0003S-009.0	4 - 14	6.80	0.39	- Ø	-	
None	M505-MW0003I-030.0	25 - 35	7.23	0.43	- Ø	-	

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 5/20/15 Time of Reading: 0947 Arrival: On [X] Off [ ]

Name: D. DANKERL Time of Reading: 1415 Departure: On [X] Off [ ]

AS Hours: 22,649.8

KW Hours: 205076

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	6.5	23.0	26.4	Pressure (PSI)	15	15	16	21	22	~~OFF~~	~~OFF~~
Pre-cooler	X	25.0	190	Flow (SCFM)	2.4	2.8	2.5	0	0	OFF	OFF
Post-cooler	X	23.0	-								
Blower Intake Filter (in-H2O)	<1.0 inch-H2O										

Turned Zone 1 on @ 14:00 AS 1-5 only

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.5	23.0	25.2	Pressure (PSI)	-	-	-	12	12	20	0
Pre-cooler	X	33.0	160°	Flow (SCFM)	-	-	-	2.4	2.4	0	0
Post-cooler	X	31.0	-								
Blower Intake Filter (in-H2O)	<1.0 inch-H2O										

AS-14 off - Well compromised

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.5	23.0	24.0	Pressure (PSI)	11	14	19	21	22	16	10
Pre-cooler	X	28.0	175°	Flow (SCFM)	2.1	2.2	2.5	2.5	1.5(B)	2.3	2.3
Post-cooler	X	27.0	-								
Blower Intake Filter (in-H2O)	<1.0 inch-H2O										

(B) = bouncing

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.8	23.0	26.2	Pressure (PSI)	14	19	29	30	6	30	28
Pre-cooler	X	32.0	160°	Flow (SCFM)	2.0	2.0	0	0	2.0	1.5(B)	1.6
Post-cooler	X	30	-								
Blower Intake Filter (in-H2O)	<1.6 inch-H2O										

(B) = Bouncing.

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): Timer minutes: 208 Time read: 0950

Timer 2 (Solenoid 2): Timer minutes: 32 Time read: 1114

Timer 3 (Solenoid 4): Timer minutes: 34 Time read: 1245

Notes: Water in AS 17 + 18 Flow meters

AS-1 through AS-10 have been shut down

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 5/20/15 **Name:** Dave D, Drew

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	7.22	1.01	0.0	-	
1	M505-MW0016-036.0	33.5 - 38.5	6.98	3.78	0.0	-	
2	M505-MW0023-025.0	22.5 - 27.5	6.40	1.50	+1.3	-	
2	M505-MW0024-035.0	32.5 - 37.5	6.33	0.43	0	-	
2	M505-MW0025-025.0	22.5 - 27.5	9.13	2.58	0	-	
2	M505-MW0026-035.0	32.5 - 37.5	9.13	1.96	0	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.97	0.35	+0.7	-	
2	M505-MW0042-035.0	32.5 - 37.5	7.02	2.16	0	-	
2	M505-MW0050-010.0	5.0 - 15.0	9.34	0.55	0	-	
2/4	M505-MW0037-010.0	5.0 - 15.0	6.91	0.29	0	-	
3	M505-MW0032-025.0	32.5 - 37.5	11.0 (R)	3.24	+6.5	-	UIP
3	M505-MW0033-025.0	22.5 - 27.5	8.69	1.09	0.0	-	
3	M505-MW0051-025.0	22.5 - 27.5	7.63	2.11	0.0	-	
3	M505-MW0053-010.0	5.0 - 15.0	5.25	7.32	+20	-	Bubbling
3	M505-MW0054-010.0	5.0 - 15.0	7.91	9.08	+0.6	-	Bubbling.
3	M505-MW0055-025.0	22.5 - 27.5	7.88	2.82	0.0	-	

(R) = Rising

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 5/20/15 **Name:** Dave D

Name: Dave W

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	6.16	0.98	0	-	
4	M505-MW0007I-030.0	25 - 35	6.72	1.08	0	-	
4	M505-MW0010IS-025.5	23 - 28	6.83	5.23	0	-	
4	M505-MW0013IS-025.5	23 - 28	7.08	5.99	0	-	
4	M505-MW0035-025.0	22.5 - 27.5	5.61	0.45	[illegible]	-	
4	M505-MW0036-035.0	32.5 - 37.5	5.03	0.31	0	-	
4	M505-MW0039-032.5	30 - 35	6.08	5.55	+0.6	-	
4	M505-MW0040-022.5	22.5 - 27.5	6.40	0.35	0	-	
4	M505-MW0044-027.5	20 - 35	6.10	0.31	+0.5	-	
4	M505-MW0049-027.5	20 - 35	9.86	0.53	0	-	
None	M505-MW0003S-009.0	4 - 14	7.18	0.49	0	-	
None	M505-MW0003I-030.0	25 - 35	7.63	0.61	0	-	

5/18/15 NASA - M505
37,345 - 37,727

- 0740 left for Site. 0945 on site.
- Met w/ David O.
- Hts meeting. Went over SOW.
- Located and opened wells.
- Collected full round of water levels.
- 1530 off base.

(7.4)

04 Hours MPC, and 1 suitcase
0.2 Bleep!

5/19/15 NASA - M505

- 0800 on Base. Hts meeting.
- Situated and calibrated meters.

- Set up on MW-55, Purging began at 0930, Sampled at 0949, well purged good.
Note: @ AGP lid would not close. Cut exactly 2" off of well to close lid. Survey height is now 2" lower.

5/19/15 NASA-M505

- MW-52, Purging began at 1009, Sampled at 1028, well purged good.
- MW-53, Purging began at 1040, Sampled at 1059, well purged good.
- MW-51, Purging began at 1118, Sampled at 1137, well purged good.
- MW-33, Purging began at 1154, Sampled at 1213, well purged good.
- MW-32, Purging began at 1221, Sampled at 1240, well purged good.
- MW-35, Purging began at 1259, Sampled at 1318, well purged good.
- Poured Purge water to drum.
- MW-0049, Purging began at 1410, Sampled at 1429, well purged good.
- MW-26, Purging began at 1446, Sampled at 1505, well purged good.
- MW-59, Purging began at 1524, Sampled at 1543, well purged good.
- MW-58, Purging began at 1558, Sampled at 1617, well purged good.
- MW-21, Purging began at 1638, Sampled at 1657, well purged good.
- Poured development water to Drum, Post Cal'd meters. Locked up, off base at 1820.

TBH (10.4)

5/20/15 NASA-M505

- 0900 on base. Met w/ David D.
- HTS meeting.
- Set up and calibrate meters.
- Set up on MW-56, Purging began at 0925, Sampled at 0944, well purged good.
- MW-57, Purging began at 0957, Sampled at 1016, well purged good.
- MW-28, Purging began at 1034, Sampled at 1053, well purged good.
- MW-27, purging began at 1126, Sampled at 1145, well purged good.
- MW-30, purging began at 1202, Sampled at 1221, well purged good.
- MW-29, Purging began at 1315, Sampled at 1334, well purged good.
- Finished well sampling. Post Cal'd meters
- Sample management, prepped samples for shipping. Dropped samples at Fed Ex for shipping.
- Picked up supplies at Home Depot to re-develop AS's wells.

- DTB for AS-13 is 34.61, bottom felt somewhat soft.

5/20/15 NASA-M505

- Developed wells with 1.5" whale pump. Surged screen. Pumped 10 gallons surging well several times, water started out clear and never got turbid. Well only drew down to ~21' while pumping and never went dry. DTB after pumping was still 34.61'. Screen appears to be in good shape with hard bottom. Let recharge.
- AS-14 - DTB 31.6' bottom feels soft. Water was muddy w/ native sand as soon as pumping began. Pump continued to clog w/ sand and kept snagging up on obstruction in well ~31.5'. Due to the height of the sand in well along with the grain size (could not pass through sump screen) I believe the snag in the well is a cracked well. Well may need to be replaced
- AS-27 DTB is 34.65 [redacted]. There is a obstruction at 32.46 that the water level probe could barely get passed
- Pump could not get passed obstruction.
- Pumped ~6 gallons, water was a little turbid at first but cleared up. Well recharged →

5/20/15 NASA-M505
Good. Bottom felt hard after pumping but could not get pump into well screen
- Poored development water to drum.
- Left AS-13 & 27 open at vault. Closed valve on AS-14.
- Started system, sent air to 13 & 27, air is getting to wells.
- Closed well cleanouts at vaults and restarted zones. Still not getting flow at 13 & 27.
- Put system in Auto, cleaned up.
- off base at 1850. TDH-10.8

5/21/15 NASA-M505
- 0900 on base. System running on arrival.
- H&S meeting.
- Set up equipment, calibrated D.O. meter.
- Took readings for zone 1-3, switched to zone 2, let zone run for 30 minutes then took system and well readings.
- Switched to zone 4, let zone run for 30 min. Took system and well readings.
- Turned on zone-1 wells. balanced wells, Put system in Auto. Locked up.
off base at 1430. Back and unloaded at 1630.

NHSA M505 5/19/15

0700 Mob to site
0830 Pick up drums in ORCAnpd
0930 on site, safety meeting
1000 start water levels
1230-1300 lunch (0.5)
1330 water levels
1500 water levels complete
1530 off site

8.5 − .5(lunch) = 8

NASA M505 5/19/15 -DTD

TV014020.0002

0800 on base 0830 safety meeting
0840 cal meters
0900 Start Sampling! -
• organize bottles + plan event

1007	M505-MW0045-034.5-20150519
1057	M505-MW0007-030.0-20150519
1135	M505-MW0016-025.5-20150519
1224	M505-MW0049.5-009.0-20150519
1301	M505-MW0031-030.0-20150519
1344	M505-MW0041-025.0-20150519
1419	M505-MW0042-035.0-20150519
1507	M505-MW0048-027.5-20150519
1551	M505-MW0018-036.0-20150519
1627	M505-MW0013S-025.5-20150519
1705	M505-MW0016-036.0-20150519
	pack up / Post cal, Dump water
	Label Drum
1815	off base
	+ 15 min CoC's + e hotel = 10.5
1742	MW0023 Sampled.

Drum pH 1.38 Drum # 198396 (+0.5 ORCLN report)

M505 - NASA 5/20/15

0800 on base 0830 Safety meeting
0840 cal meters 0900 Commence
• organize bottles/Planning Sampling.

0947	M505-MW0039-032.5-20150520
1022	M505-MW0040-022.5-20150520
1106	M505-MW0044-027.5-20150520
1153	M505-MW0020-036.0-20150520
1237	M505-MW0019-025.0-20150520
1328	M505-MW0065-030.0-20150520
1400	M505-EB-20150520
1500	Ship Samples / Go To Home Pad
1600-1830	Work on A513, 14, +27
	A-514 shows signs of breakage (heavy sand deposits at Bottom)
1845	off base

10.7

5/20/15 11505 -DJD

• SYSTEM on @ Arrival

0900 on base 0915 Safety Meeting

0930 START SYSTEM readings.

1000 START well readings - Zone III

1040 Zone III completed - Turned System to Zone II

1110 START SYSTEM Readings Zone II

1210 Zone II completed - Turned system to Zone IV

1240 START Zone IV readings

1400 Zone IV readings complete turned AS-1 thru 5 on AS 4+5 no flow

1430 off site - Breaks
• Returned Rental EQP

1630 End of DAY

(7.5) + (.3) Timesheet / Expense report + Beaucarts consolidate field papers

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 6/15/15 Time of Reading: 1 Arrival: 1212 On [X] Off [ ]

Name: D. Dankert Time of Reading: Departure: 1715 On [X] Off [ ]

AS Hours: 23,252.2

KW Hours: 211272

AS-1 through AS-10 have been shut down

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	6.6	23.0	26.2	Pressure (PSI)	12	15	15	21	22	–	–
Pre-cooler	X	25.0	180°F	Flow (SCFM)	2.9	2.8	2.9	0	0	–	–
Post-cooler	X	24.0	–								
Blower Intake Filter (in-H2O)	<1.0	inch-H2O									

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.5	23.0	26.6	Pressure (PSI)	–	–	13.0	13.0	11.0	15	–
Pre-cooler	X	32.0	160	Flow (SCFM)	–	–	1.6 (B)	1.7	1.5	0	–
Post-cooler	X	31	–								
Blower Intake Filter (in-H2O)	<1.0	inch-H2O									

ZONE 3/ Solonoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.6	23.0	26.2	Pressure (PSI)	14	15	16	18	18	20	16
Pre-cooler	X	25.0	180°F	Flow (SCFM)	2.0	2.0	2.1	1.8 (B)	<1 (B)	1.6 (B)	2.0
Post-cooler	X	24.0	–								
Blower Intake Filter (in-H2O)	<1.0	inch-H2O									

(B) = Bouncing.

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.6	23.0	26.9	Pressure (PSI)	15	20	25	20	0	18	22
Pre-cooler	X	32.0	160°	Flow (SCFM)	2.4	2.0	0.0	2.1	2.2	0	1.6 (B)
Post-cooler	X	30.5	–								
Blower Intake Filter (in-H2O)	<1.0	inch-H2O									

(B) = bouncing.

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3): SYS on @ Arrival Timer minutes: 52 Time read: 1130

Timer 2 (Solenoid 2): Switched on Timer minutes: 40 Time read: 1345

Timer 3 (Solenoid 4): Switched on Timer minutes: 40 Time read: 1440

Notes:

AS-1 through AS-10 have been shut down

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 6/15/15 **Name:** D. DAWKINS

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	6.46	0.48	+1.02	-	UIP
1	M505-MW0016-036.0	33.5 - 38.5	ARTESIAN			-	UHP
2	M505-MW0023-025.0	22.5 - 27.5	6.26	0.92	0.0	-	
2	M505-MW0024-035.0	32.5 - 37.5	6.27	3.03	0.0	-	
2	M505-MW0025-025.0	22.5 - 27.5	8.55	1.58	0.0	-	
2	M505-MW0026-035.0	32.5 - 37.5	8.50	1.26	0.0	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.75	0.11	+0.53	-	
2	M505-MW0042-035.0	32.5 - 37.5	6.79	2.32	0.0	-	
2	M505-MW0050-010.0	5.0 - 15.0	8.76	2.35	0.0	-	
2/4	M505-MW0037-010.0	5.0 - 15.0	6.82	0.06	0.0	-	6.82 DTW.
3	M505-MW0032-025.0	32.5 - 37.5	9.10	5.26	+13.28	-	UHP - Bubbling
3	M505-MW0033-025.0	22.5 - 27.5	7.90	3.54	0.0	-	
3	M505-MW0051-025.0	22.5 - 27.5	7.12	1.02	0.0	-	
3	M505-MW0053-010.0	5.0 - 15.0	2.55	8.42	>+20	-	UIP - Bubbling
3	M505-MW0054-010.0	5.0 - 15.0	7.68	9.08	+2.84	-	UIP. Bubbling
3	M505-MW0055-025.0	22.5 - 27.5	7.24	3.09	0.0	-	

UHP - Under high press
UIP - Under initial press

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 6/15/15

Name: D. Dankel

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	6.08	0.13	0.0	-	
4	M505-MW0007I-030.0	25 - 35	6.72	0.76	+0.16	-	
4	M505-MW0010IS-025.5	23 - 28	6.82	1.45	0.0	-	
4	M505-MW0013IS-025.5	23 - 28	7.01	5.36	0.0	-	
4	M505-MW0035-025.0	22.5 - 27.5	5.00	0.15	0.0	-	0.15 DO
4	M505-MW0036-035.0	32.5 - 37.5	4.30	0.10	0.0	-	0.10 DO
4	M505-MW0039-032.5	30 - 35	5.98	2.72	+0.15	-	
4	M505-MW0040-022.5	22.5 - 27.5	6.41	0.10	0.0	-	
4	M505-MW0044-027.5	20 - 35	5.32	0.76	0.0	-	UIP
4	M505-MW0049-027.5	20 - 35	9.27	0.65	+0.10	-	
None	M505-MW0003S-009.0	4 - 14	7.11	0.10	0.0	-	
None	M505-MW0003I-030.0	25 - 35	7.32	0.04	0.0	-	

UIP: Under initial pressure

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 7/31/15

Time of Reading: _____ Arrival: 11:24 On ☒ Off ☐

Name: D. DANVERS

Time of Reading: _____ Departure: 1445 On ☒ Off ☐

AS Hours: 24,355.5

KW Hours: 222611

~~AS-1 through AS-10 have been shut down~~

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	6.4	23.0	23.9	Pressure (PSI)	16	15	17	26	26	OFF	OFF
Pre-cooler	X	32	150	Flow (SCFM)	2.1	2.0	2.1	Ø	Ø	OFF	OFF
Post-cooler	X	30	–								
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.4	23.0	24.2	Pressure (PSI)	–	–	15	15	15	17	15
Pre-cooler	X	32	165	Flow (SCFM)	–	–	2.4	2.3	2.3	1.4	2.0
Post-cooler	X	30	–				(B)		(B)	(B)	(B)
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
Panel	6.4	23.0	23.9	Pressure (PSI)	16	17	16	21	20	22	15
Pre-cooler	X	31	150	Flow (SCFM)	2.1	2.2	2.0	Ø	Ø	1.4	1.9
Post-cooler	X	30	–							(B)	
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 4/ Solonoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
Panel	6.7	25.0	25.5	Pressure (PSI)	16	20	25	27	17	25	25
Pre-cooler	X	32	160	Flow (SCFM)	1.9	2.0	0	1.9	2.0	2.0	2.2
Post-cooler	X	30	–					(B)		(B)	(B)
Blower Intake Filter (in-H2O)	<1 inch-H2O										

Note these are located in a separate outside compound not in trailer

(B) = flow ball bouncing.

Timer 1 (Solenoid 1 & 3): _____ Timer minutes: 3 Time read: 1045

Timer 2 (Solenoid 2): _____ Timer minutes: 35 Time read: 1255

Timer 3 (Solenoid 4): _____ Timer minutes: 30 Time read: 1420

Notes:

~~AS-1 through AS-10 have been shut down~~

7/31/15 NHSA - M505

Dyo

0800 pick up media (DC), Mob to site
1035 on site @ M505
1045 Zone IV on (3 min), blow out water in line @ manifold
* Cat responses to flow on all but M524
1110 Start readings zone IV
1225 Zone IV complete, Turn SYS to Z1
1255 START Zone 1 readings
1350 Zone 1 completed, SYS in Zone 2
1420 START Zone 2 readings
1430 Saw lightning, called weather Desk: Phase II lightning in effect until 20:00 hours. Placed system back in AUTO & prepped for Departure
1500 off site, Demob
1700 Office, End of DAY

(9)

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 7/31/15

Name: D. Dawkins

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	NM	NM	NM	-	phase II
1	M505-MW0016-036.0	33.5 - 38.5	NM	NM	NM	-	phase II
2	M505-MW0023-025.0	22.5 - 27.5	4.55	0.26	+0.51	-	UIP
2	M505-MW0024-035.0	32.5 - 37.5	4.60	0.12	Ø	-	
2	M505-MW0025-025.0	22.5 - 27.5	NM	NM	NM	-	phase II
2	M505-MW0026-035.0	32.5 - 37.5				-	
2	M505-MW0041-025.0	22.5 - 27.5				-	
2	M505-MW0042-035.0	32.5 - 37.5				-	
2	M505-MW0050-010.0	5.0 - 15.0				-	
2/4	M505-MW0037-010.0	5.0 - 15.0				-	
3	M505-MW0032-025.0	32.5 - 37.5	7.22	1.78	+3.28	-	UIP/Bubbling
3	M505-MW0033-025.0	22.5 - 27.5	6.82	0.54	Ø	-	UIP
3	M505-MW0051-025.0	22.5 - 27.5	6.30	0.12	Ø	-	
3	M505-MW0053-010.0	5.0 - 15.0	5.39	4.84	Ø	-	Bubbling
3	M505-MW0054-010.0	5.0 - 15.0	7.28	7.63	+1.28	-	Bubbling
3	M505-MW0055-025.0	22.5 - 27.5	6.80	4.26	Ø	-	

Phase II

Phase II

Phase II

UIP = well under initial pressure

1420 phase II lightning
- called weather desk, expected to be in effect until 8pm

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 7/31/15 **Name:** D. DANIELS

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.03	0.12	Ø	-	
4	M505-MW0007I-030.0	25 - 35	5.60	0.13	Ø	-	
4	M505-MW0010IS-025.5	23 - 28	5.70	0.09	Ø	-	
4	M505-MW0013IS-025.5	23 - 28	NM	NM	NM	-	Under Vehicle
4	M505-MW0035-025.0	22.5 - 27.5	4.16	0.19	Ø	-	
4	M505-MW0036-035.0	32.5 - 37.5	3.75	0.19	+0.10	-	
4	M505-MW0039-032.5	30 - 35	4.76	1.73	Ø	-	
4	M505-MW0040-022.5	22.5 - 27.5	5.20	0.12	Ø	-	
4	M505-MW0044-027.5	20 - 35	5.04	0.03	Ø	-	
4	M505-MW0049-027.5	20 - 35	8.40	0.12	Ø	-	
None	M505-MW0003S-009.0	4 - 14	6.55	0.12	Ø	-	
None	M505-MW0003I-030.0	25 - 35	6.66	0.16	Ø	-	

12:11 phase I lightning.

14:20 phase II lightning in effect until 20:00 hours

8/24/15 NASA M505 -010

TM014020.0000

0800 Mob to site, pick up DO meter @ US Env, pick up food/drink in Orlando

1030 onsite @ M505 (SYSTEM off)
- SYSTEM in Zone II @ Arrival 114 min
- Switched to Zone IV to blow out Condensation line, Zone IV in hand
- Equalized AS 1 min (24 AS 25+ Response)

1115 STARTED Readings Zone IV

1230 Zone IV readings complete
- SYSTEM Turned to Zone (III)

1245 start zone III (3) readings

1335 Zone 3 complete, Turn System to Zone 2

(12:18) * Phase 1 lightning KSC All Areas

1355 Zone 2 readings started

1520 Zone 2 complete
- SYSTEM Put back in AUTO

1530 Offsite, Depart TAMPA

1730 End of DAY

(9.5)

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 8/24/15

Time of Reading: _____ Arrival: 1030 On ☒ Off ☐

Name: D. DAVILLA Time of Reading: _____ Departure: 1530 On ☒ Off ☐

AS Hours: 24931.5

KW Hours: 228386

~~AS-1 through AS-10 have been shut down~~

ZONE 1/ Solenoid 1	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-1	AS-2	AS-3	AS-4	AS-5	AS-6	AS-7
Panel	~~6.5~~	23.6	26.6	Pressure (PSI)	11	10	16.0	23	25	~~OFF~~	~~OFF~~
Pre-cooler		26.0	170	Flow (SCFM)	2.0	2.0	1.9	0	0		
Post-cooler		25.0	—								
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 2/ Solenoid 2	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-8	AS-9	AS-10	AS-11	AS-12	AS-13	AS-14
Panel	6.5	23.0	26.8	Pressure (PSI)	~~OFF~~	~~OFF~~	10.0	12	13	15	12
Pre-cooler				Flow (SCFM)			<1 (B)	~~2.0~~ 2.0	1.9	0	0
Post-cooler			—								
Blower Intake Filter (in-H2O)	<1 inch-H2O										

ZONE 3/ Solenoid 3	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-15	AS-16	AS-17	AS-18	AS-19	AS-20	AS-21
					12	11	17	18	18		
Panel	6.5	23.0	26.6	Pressure (PSI)	~~20~~	~~22~~	~~25~~	~~18~~ (B)	18	20	12
Pre-cooler		26.0	170	Flow (SCFM)	2.0	2.2	2.0	1.6	0	1.6	2.0
Post-cooler		25.0	—								
Blower Intake Filter (in-H2O)	<1 inch-H2O										

(B) = bouncing.

ZONE 4/ Solenoid 4	Flow (inch-H2o)	Pressure (PSI)	Temp	Gauges	AS-22	AS-23	AS-24	AS-25	AS-26	AS-27	AS-28
									gauge Frozen/Broken		
Panel	~~6.8~~	23.0	25.9	Pressure (PSI)	16	20	24	26	0.3	18	25
Pre-cooler		31.0	160°F	Flow (SCFM)	2.0	2.0	0	0	2.0	2.2	2.1 (B)
Post-cooler		30.0	—								
Blower Intake Filter (in-H2O)	<1 inch-H2O										

(B) = bouncing.

Note these are located in a separate outside compound not in trailer

Timer 1 (Solenoid 1 & 3):	Timer minutes: 25	Time read: 1258
Timer 2 (Solenoid 2):	Timer minutes: ~~15~~ 25	Time read: 1035
Timer 3 (Solenoid 4):	Timer minutes: 30	Time read: 1130

Notes:

~~AS-1 through AS-10 have been shut down~~

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 8/24/15

Name: D. DANKERT

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
1	M505-MW0015-025.0	22.5 - 27.5	6.50	0.33	Ø	-	
1	M505-MW0016-036.0	33.5 - 38.5	6.36	0.13	+1.63	-	VIP (1.13 Ø)
2	M505-MW0023-025.0	22.5 - 27.5	5.75	0.68	Ø	-	VIP (small)
2	M505-MW0024-035.0	32.5 - 37.5	5.73	1.48	Ø	-	
2	M505-MW0025-025.0	22.5 - 27.5	8.30	0.85	Ø	-	
2	M505-MW0026-035.0	32.5 - 37.5	8.05	0.37	Ø	-	
2	M505-MW0041-025.0	22.5 - 27.5	6.32	0.23	Ø	-	
2	M505-MW0042-035.0	32.5 - 37.5	6.30	2.68	Ø	-	
2	M505-MW0050-010.0	5.0 - 15.0	8.60	0.05	Ø	-	
2/4	M505-MW0037-010.0	5.0 - 15.0	6.25	0.12	Ø	-	
3	M505-MW0032-025.0	32.5 - 37.5	5.60	7.73	>+20	-	VHP / Bubbling
3	M505-MW0033-025.0	22.5 - 27.5	7.99	0.74	Ø	-	VIP
3	M505-MW0051-025.0	22.5 - 27.5	7.18	0.11	Ø	-	
3	M505-MW0053-010.0	5.0 - 15.0	4.90	8.28	+0.66	-	VIP / Bubbling
3	M505-MW0054-010.0	5.0 - 15.0	7.60	7.85	+0.85	-	Bubbling.
3	M505-MW0055-025.0	22.5 - 27.5	7.10	2.07	Ø	-	

13:15 Phase I lightning All Areas KSC

Site Specific Operation and Maintenance Form
NASA KSC Building M505 AS System

Date: 8/24/15

Name: D. DANIELSON

Name:

Zone	Well ID	Screen Interval (ft bls)	DTW	DO (mg/L)	Pressure (in-H2O)	OVA-PID	Notes
4	M505-MW0007S-009.0	4.0 - 14.0	5.45	0.16	0	-	
4	M505-MW0007I-030.0	25 - 35	6.02	0.07	0	-	DO. 0.07
4	M505-MW0010IS-025.5	23 - 28	6.13	0.11	0	-	
4	M505-MW0013IS-025.5	23 - 28	—	—	—	-	Vehicle on well
4	M505-MW0035-025.0	22.5 - 27.5	5.23	2.60	0	-	
4	M505-MW0036-035.0	32.5 - 37.5	4.15	0.10	0	-	
4	M505-MW0039-032.5	30 - 35	5.26	1.50	0	-	
4	M505-MW0040-022.5	22.5 - 27.5	5.62	0.83	0	-	
4	M505-MW0044-027.5	20 - 35	5.41	0.11	0	-	
4	M505-MW0049-027.5	20 - 35	8.55	1.95	0	-	
None	M505-MW0003S-009.0	4 - 14	6.20	0.25	0	-	
None	M505-MW0003I-030.0	25 - 35	6.88	0.18	0	-	

Appendix B

Groundwater Sampling Logs and Field Notes

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC - NASA	
WELL NO:	MW0055	SAMPLE ID:	M505-MW0055-025.0-20140813	DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	27.5 feet to 27.5 feet	7.30	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1045	1111	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1105	1.0	1.0	0.05	7.24	7.20	27.83	3,850	0.71	5.61	clear	none	-108
1108	0.15	1.15	0.05	7.24	7.20	27.79	3,847	0.69	5.84	"	"	-109
1111	0.15	1.30	0.05	7.24	7.20	27.75	3,844	0.66	6.12	"	"	-110

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankel / Arcadis		1112	1114

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N(replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0055	3	CG	40ml	HCL	–	–	VOC's	APP	210

REMARKS: Sampled @ 1112

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC NASA
WELL NO:	MW-0052	SAMPLE ID:	M505-MW0052-010-0-20140813
		DATE:	8/13/14

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	7.09	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (15 feet – 7.09 feet) X .04 gallons/foot = 0.31 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 20 feet) + .1 gallons = .12 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10	PURGING INITIATED AT:	1120	PURGING ENDED AT:	1146	TOTAL VOLUME PURGED (gallons):	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1140	1.0	1.0	0.05	7.15	5.71	27.74	363	0.20	32.1	TANNIC	none	458
1143	0.15	1.15	0.05	7.15	5.72	27.76	364	0.19	29.4	"	"	457
1146	0.15	1.30	0.05	7.15	5.73	27.81	364	0.19	31.3	"	"	458

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1147	SAMPLING ENDED AT:	1149
PUMP OR TUBING DEPTH IN WELL (feet):	10	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0052	3	CG	40ml	HCl	-	-	VOC's	APP	<100

REMARKS: Sampled @ 1147

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0051	SAMPLE ID: M505-MW0051-025-0-20140813	DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.89	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .01 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1156	PURGING ENDED AT: 1222	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1216	1.0	1.0	0.05	7.33	7.43	29.82	2,755	0.38	11.8	clear	none	-148
1219	0.15	1.15	0.05	7.34	7.41	29.78	2,761	0.35	9.76	"	"	-145
1222	0.15	1.30	0.05	7.33	7.40	27.74	2,772	0.31	8.46	"	"	-143

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert/Aradia	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1223	SAMPLING ENDED AT: 1225
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0051	3	CG	40ml	HCL	–	–	VOC's	APP	<100

REMARKS: 1223

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0033	SAMPLE ID: M505-MW0033-025.0-20140813	DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.95	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1235	PURGING ENDED AT: 1301	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1255	1.0	1.0	0.05	8.10	6.95	28.81	2,716	1.84	14.2	clear	none	-30
1258	0.15	1.15	0.05	8.10	6.96	28.84	2,716	1.31	12.4	"	"	-29
1301	0.15	1.30	0.05	8.10	6.98	28.86	2,718	1.29	11.8	"	"	-29

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1302	SAMPLING ENDED AT: 1309
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0033	3	CG	40ml	HCl	–	–	VOCs	APP	<100

REMARKS: Sampled @ 1302

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC - NASA	
WELL NO: MW0032	SAMPLE ID: M505-MW0032-035-8-20140813	DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 8.14	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	PURGING INITIATED AT: 1306	PURGING ENDED AT: 1332	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1326	1.0	1.0	0.05	8.78	7.06	31.13	3,057	4.03	27.5	clear	none	-117
1329	0.15	1.15	0.05	8.79	7.05	31.11	3,055	4.00	25.6	↓	↓	+20
1332	0.15	1.30	0.05	8.78	7.05	31.09	3,054	4.04	26.1	↓	↓	123

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / ArcAs	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1333	SAMPLING ENDED AT: 1335
PUMP OR TUBING DEPTH IN WELL (feet): 35'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0032	3	CG	40ml	HCl	–	–	VOC's	APP	<100

REMARKS: Sampled @ 1333

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-VAB A
WELL NO: MW0025	SAMPLE ID: M505-MW0025-0250-20140813 DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 32.5 feet	STATIC DEPTH TO WATER (feet): 7.89	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1355	PURGING ENDED AT: 1421	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1415	1.0	1.0	0.05	7.99	6.78	27.81	3,959	0.37	8.16	clear	none	-88.5
1418	0.15	1.15	0.05	7.99	6.78	27.82	3,957	0.38	7.84	"	"	-87.8
1421	0.15	1.30	0.05	7.99	6.78	27.84	3,954	0.36	7.92	"	"	-88.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1422	SAMPLING ENDED AT: 1424
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0025	3	CG	40 ml	HCL	–	–	VOC's	APP	<100

REMARKS: sampled @ (1422)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA
WELL NO: MW0026	SAMPLE ID: M505-MW0026-0354-20140813
DATE: 8/13/14	

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 2.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 7.94	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DERTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = ~.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1430	PURGING ENDED AT: 1456	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1450	1.0	1.0	0.05	9.22	6.90	26.54	3,701	0.34	3.16	clear	none	-0.9
1453	0.15	1.15	0.05	9.22	6.90	26.57	3,707	0.32	2.84	"	"	-1.5
1456	0.15	1.30	0.05	9.23	6.91	26.61	3,712	0.31	3.02	"	"	-2.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1457	SAMPLING ENDED AT: 1459
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0026	3	CG	40ml	HCl	–	–	VOC's	APP	<100

REMARKS: sampled @ 1457

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC - NASA	
WELL NO: MW0049	SAMPLE ID: M505-MW0049-027.5-20140813	DATE: 8/13/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 8.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (35 feet – 8.25 feet) X .04 gallons/foot = 1.07 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1517	PURGING ENDED AT: 1545	TOTAL VOLUME PURGED (gallons): 1.40

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1539	1.10	1.10	0.05	8.33	7.07	28.21	1,904	0.40	5.46	clear	none	-94.6
1542	0.15	1.25	0.05	8.34	7.07	28.23	1,906	0.38	4.82	"	"	-94.2
1545	0.15	1.40	0.05	8.33	7.07	28.26	1,909	0.37	3.16	"	"	-93.7

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David DanKeil/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1546	SAMPLING ENDED AT: 1548
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0049	3	CG	40 ml	HCl	–	–	8260	APP	<100

REMARKS: Sampled @ 1548

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	JLSC-NAS O
WELL NO:	MW0019	SAMPLE ID:	M505-MW0019-0250-20140813
DATE:	8/13/14		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	6.40	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	1810	PURGING ENDED AT:	1826	TOTAL VOLUME PURGED (gallons):	1.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1820	1.0	1.0	0.1	6.56	7.33	28.85	3,488	5.95	7.13	clear	none	+38.2
1823	0.3	1.3	0.1	6.56	7.32	28.85	3,490	6.02	6.86	"	"	+39.1
1826	0.3	1.6	0.1	6.57	7.32	28.84	3,493	5.97	6.29	"	"	+39.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1827	SAMPLING ENDED AT:	1829
PUMP OR TUBING DEPTH IN WELL (feet):	25	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0019	3	CG	40ml	HCl	-	—	VOC's	APP	<100

REMARKS: •well under pressure @ opening
high DO but stable @ 6.00 mg/L Sampled @ (1827)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC - NASA
WELL NO:	MW0020	SAMPLE ID:	M505-MW0020-0260-20140813
DATE:	8/13/14		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	23.5 feet to 28.5 feet	STATIC DEPTH TO WATER (feet):	6.20	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 46 feet) + 1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	36	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	36	PURGING INITIATED AT:	1834	PURGING ENDED AT:	1850	TOTAL VOLUME PURGED (gallons):	1.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1844	1.0	1.0	0.1	6.6F	7.51	29.68	4,356	5.55	11.2	clear	none	831.9
1847	0.3	1.3	0.1	6.6F	7.50	28.64	4,378	5.53	9.18	↓	↓	
1850	0.3	1.6	0.1	6.6F	7.50	28.62	4,332	5.56	9.69			

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Danker	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1851	SAMPLING ENDED AT:	1853
PUMP OR TUBING DEPTH IN WELL (feet):	36	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0020	3	CG	40ml	HCl	–	–	VOC's	APP	<100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC NASA	
WELL NO: MW0044	SAMPLE ID: M505-MW0044-0275-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.12	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet – 5.12 feet) X .04 gallons/foot = 1.19 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1740	PURGING ENDED AT: 1810	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1804	1.2	1.2	0.05	5.24	7.14	26.46	3,249	0.86	7.14	clear	none	-22.4
1807	0.15	1.35	0.05	5.25	7.14	26.38	3,248	6.84	8.62	"	"	-21.6
1810	0.15	1.50	0.05	5.24	7.15	26.37	3,247	0.82	7.22	"	"	-20.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1807	SAMPLING ENDED AT: 1813
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0044	3	CG	40ml	HCl	~	~	VOCs	APP	100

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC NASA	
WELL NO:	MW0040	SAMPLE ID:	M505-MW0040-025.0-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	22.5 feet to 27.5 feet	5.71	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = 1.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1509	1520	1.6

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1514	1.0	1.0	.1	5.87	6.99	26.95	1,556	0.45	14.1	clear	none	-73.7
1517	0.3	1.3	.1	5.87					11.3			
1520	0.3	1.6	.1	5.88					9.70			

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankel / Arcadis		1521 1504	1523

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0040	3	CG	40ml	HCl	–	–	VOC's	APP	200

REMARKS:

1521

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA
WELL NO: MW0039	SAMPLE ID: M505-MW0039-0325-20140814
	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.33	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

gallons + (.0014 gallons/foot X 45 feet) + 1 gallons = 1.6 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
32.5	32.5	1433	1459	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1453	1.0	1.0	0.05	5.49	7.04	27.21	1,406	2.16	7.14	clear	none	+20.4
1456	0.15	1.15	0.05	5.48	7.03	27.30	1,407	2.14	6.36	"	"	+21.6
1459	0.15	1.30	0.05	5.48	7.03	27.18	1,409	2.15	6.82	"	"	+22.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1500	SAMPLING ENDED AT: 1502
PUMP OR TUBING DEPTH IN WELL (feet): 32.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0039	3	CG	40ml	HCl	–	–	VOA's	APP	<100

REMARKS: Sample hyl @ 1500

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505		SITE LOCATION: KSC - NASA	
WELL NO: MW0013	SAMPLE ID: M505-MW0013-025-0-20140814		DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 6.40	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1355	PURGING ENDED AT: 1421	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1415	1.0	1.0	0.05	6.45	7.32	30.36	2,644	6.06	8.14	clear	none	+28.1
1418	0.15	1.15	0.05	6.45	7.32	30.32	2,635	6.04	7.82	"	"	+28.4
1421	0.15	1.30	0.05	6.45	7.32	30.29	2,629	6.07	9.12	"	"	+28.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1422	SAMPLING ENDED AT: 1424
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0013	3	CG	40ml	HCL	–	–	VOC's	PPP	200

REMARKS:

1422

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC NASA	
WELL NO: MW0045	SAMPLE ID: M505-MW0045-034.5-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32 feet to 37 feet	STATIC DEPTH TO WATER (feet): 6.06	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.00104 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	PURGING INITIATED AT: 0850	PURGING ENDED AT: 0916	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0910	1.0	1.0	0.05	6.28	6.94	29.47	3,652	0.48	12.7	clear	none	-98.2
0913	0.15	1.15	0.05	6.28	6.94	29.49	3,654	0.41	11.6	"	"	-98.4
0916	0.15	1.30	0.05	6.28	6.94	29.51	3,655	0.45	11.8	"	"	-97.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0917	SAMPLING ENDED AT: 0919
PUMP OR TUBING DEPTH IN WELL (feet): 34.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0045	3	CG	40ml	HCL	–	–	VOC's	APP	<100

REMARKS: sampled @ 0917

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0046	SAMPLE ID: MW0046-010-0-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 6.06	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 20 feet) + .1 gallons = .12 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 0931	PURGING ENDED AT: 0957	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0951	1.0	1.0	0.05	6.20	4.27	30.13	2,912	1.14	24.7	SLT LT	none	+345
0954	0.15	1.15	0.05	6.21	4.27	30.12	2,909	1.12	26.3	" "	"	+344
0957	0.15	1.30	0.05	6.20	4.26	30.10	2,907	1.10	25.5	" "	"	+343

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0958	SAMPLING ENDED AT: 1000
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0046	3	CG	40ml	HCL	—	—	VOCs	APP	100

REMARKS: 0958

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC-NASA	
WELL NO:	MW0038	SAMPLE ID:	M505-MW0038-025-0-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	22.5 feet to 27.5 feet	5.98	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1012	1038	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1032	1.0	1.0	0.05	6.10	6.83	29.50	3,677	0.61	9.14	clear	none	+10.8
1035	0.15	1.15	0.05	6.10	6.83	29.51	3,678	0.59	9.22	"	"	+11.0
1038	0.15	1.30	0.05	6.10	6.84	29.53	3,679	0.58	8.68	"	"	+12.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Bunker / Arcadis		1039	1041

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0038	3	CG	40ml	HCL	—	—	VOC's	APP	200

REMARKS:

1039

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC NASA	
WELL NO: MW0042	SAMPLE ID: M505-MW0042-035.0-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 57.5 feet	STATIC DEPTH TO WATER (feet): 6.10	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1132	PURGING ENDED AT: 1158	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1152	1.0	1.0	0.05	6.24	6.91	28.46	2,929	0.35	8.16	clear	None	-89.0
1155	0.15	1.15	0.05	6.24	6.91	28.48	2,931	0.33	7.42	"	"	-89.2
1158	0.15	1.30	0.05	6.25	6.90	28.51	2,933	0.31	8.92	"	"	-90.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1159	SAMPLING ENDED AT: 1201
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0042	3	CA	40ml	HCl	—	—	VOC's	APP	150

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA
WELL NO: MW0048	SAMPLE ID: M505-MW0048-027.5-20140814
	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 28 feet to 38 feet	STATIC DEPTH TO WATER (feet): 6.10	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (35 feet − 6.10 feet) X .04 gallons/foot = 1.15 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1224	PURGING ENDED AT: 1251	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1245	1.2	1.2	0.05	6.15	7.13	30.11	2,984	2.97	6.14	clear	none	+79.9
1248	0.15	1.35	0.05	6.15	7.13	30.13	3.003	2.91	5.86	"	"	+78.6
1251	0.15	1.50	0.05	6.15	7.13	30.15	3,012	2.90	7.12	"	"	+78.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1252	SAMPLING ENDED AT: 1254
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0048	3	CG	40ml	HCL	—	—	VOC's	APP	200

REMARKS: Well under pressure @ opening. 1252

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC NASA	
WELL NO:	MW0041	SAMPLE ID:	M505-MW0041-20140814	DATE: 8/14/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	22.5 feet to 27.5 feet	6.05	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1058	1124	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1118	1.0	1.0	0.05	6.70	6.91	27.95	2,275	0.26	35.4	HAZY	none	-79.4
1121	0.15	1.15	0.05	6.20	6.91	27.97	2,281	0.24	33.2	〃	〃	-80.7
1124	0.15	1.30	0.05	6.20	6.91	27.98	2,294	0.23	36.1	〃	〃	-81.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankert / Arcadis		1125	1127

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0041	3	CG	40ml	HCL	—	—	VOC's	APP	<100

REMARKS:

1125

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION: KSC-NASA
WELL NO: MW0024	SAMPLE ID: MS05-MW0024-025.0-20140815
	DATE: 8/15/14

PURGING DATA

WELL DIAMETER (Inches):	TUBING DIAMETER (Inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 5.89	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 0852	PURGING ENDED AT: 0918	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0912	1.0	1.0	0.05	6.65	7.51	27.19	3,111	6.14	5.14	clear	none	+31.1
0915	0.15	1.15	0.05	6.66	7.51	27.21	3,113	6.12	4.86	″	″	+32.1
0918	0.15	1.30	0.05	6.66	7.52	27.22	3,116	6.15	4.22	″	″	+32.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0919	SAMPLING ENDED AT: 0921
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0024	3	CG	40ml	HCL	–	–	VOCs	APP	<100

REMARKS: Well under high pressure @ opening. (0919)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

The above do not constitute all of the information required by Chapter 62-160, F.A.C.

STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

Units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	ICSC NASA
WELL NO:	MW0023	SAMPLE ID:	M505-MW0023-025.0-20140815
DATE:	8/15/14		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	5.81	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 25 feet) + .1 gallons = .45 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	0820	PURGING ENDED AT:		TOTAL VOLUME PURGED (gallons):	

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0840	1.0	1.0	0.05	6.02	7.03	27.02	3,156	2.06	2.16	clear	none	+26
0843	0.15	1.15	0.05	6.02	7.03	26.99	3,153	1.96	3.02	↓	↓	+23.8
0841	0.15	1.30	0.05	6.02	7.04	26.97	3,150	1.98	2.68	↓	↓	-19.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0847	SAMPLING ENDED AT:	0849
PUMP OR TUBING DEPTH IN WELL (feet):	25	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING	Y (N) (replaced)	DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0023	3	CG	40ml	HCl	-	-	VOC's	APP	<100

REMARKS: 0847

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC NASA
WELL NO: MW0035	SAMPLE ID: M505-MW0035-025.0-20140515
DATE: 5/15/14	

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 3.92	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

\ = (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + 1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0930	PURGING ENDED AT: 0956	TOTAL VOLUME PURGED (gallons): 1.30	

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0950	1.0	1.0	0.05	4.22	6.96	26.17	2,480	0.42	11.7	clear	none	-27.8
0953	0.15	1.15	0.05	4.22	6.97	26.19	2,478	0.41	10.8	↓	↓	-28.3
0956	0.15	1.30	0.05	4.23	6.97	26.20	2,476	0.39	10.2	↓	↓	-29.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankul / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0957	SAMPLING ENDED AT: 0959
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0035	3	CG	40ml	HCL	—	—	VOC's	APP	<100

REMARKS: 0957

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC NASA	
WELL NO:	MW0038	SAMPLE ID:	M505-MW0036-035.0-20140815	DATE: 8/15/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	32.5 feet to 37.5 feet	3.62	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + (gallons = 16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1002	PURGING ENDED AT: 1028	TOTAL VOLUME PURGED (gallons):
35	35			1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1022	1.0	1.0	0.05	3.86	7.30	25.99	2,863	1.21	12.1	clear	none	-55.1
1025	0.15	1.15	0.05	3.87	7.30	25.97	3,861	1.19	9.86	"	"	-54.5
1028	0.15	1.30	0.05	3.87	7.29	25.98	2,859	1.17	9.42	"	"	-53.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1029	SAMPLING ENDED AT: 1031
David Dankel / Arcadis			

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0036	3	CG	40ml	HCl	–	–	VOC's	APP	2100

REMARKS: 1029

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

NASA MS05 8/13 - 8/15
David Dankert
Arcadis

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) ~~LAMOTTE 2020~~ **INSTRUMENT #** 1305 0C025681

PARAMETER: *[check only one]* HACH 2100

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 1.0

Standard B 10.0

Standard C _____

DATE (mm/dd/yy)	TIME (military)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (Yes/No)	TYPE (INIT/FINAL)	INITIALS
14/08/13	1016	A	1.0	1.04	–	NO	INIT	DJD
14/08/13	1017	B	10.0	10.04	–	NO	INIT	DJD
14/08/13	1900	A	1.0	1.07	–	Yes	FINAL	DJD
14/08/13	1901	B	10.0	10.12	–	Yes	FINAL	DJD
14/08/14	0804	A	1.0	1.02	–	NO	INIT	DJD
14/08/14	0805	B	10.0	9.97	–	NO	INIT	DJD
14/08/14	0817	A	1.0	1.05		NO	FINAL	DJD
14/08/14	0818	B	10.0	9.92		Yes	FINAL	DJD
14/08/15	0806	A	1.0	1.07		Yes	INIT	DJD
14/08/5	0807	B	10.0	9.97		NO	INIT	DJD
14/08/15	1040	A	1.0	1.03		NO	FINAL	DJD
14/08/15	1041	B	10.0	10.11		NO	FINAL	DJD
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 07C2653AV

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 Standard D 100% Amb Air

Standard B 7.00

Standard C 1000 us/cm

DATE (mm/dd/yy)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
14/08/13	1017	A	4.01	4.02	-	NO	INIT	DJD
〃	1018	B	7.00	7.02	-	NO	INIT	DJD
	1019	C	1000	1003	-	NO	INIT	DJD
↓	1022	D	100%	99.7	-	NO	INIT	DJD
14/08/13	1904	A	4.01	4.03	-	NO	FINAL	DJD
	1906	B	7.00	7.04	-	NO	FINAL	DJD
	1907	C	1000	1004	-	NO	FINAL	DJD
↓	1913	D	100%	99.2	-	NO	FINAL	DJD
14/08/14	0806	A	4.01	4.05	-	Yes	INIT	DJD
	0808	B	7.00	7.06	-	Yes	INIT	DJD
	0810	C	1000	1011	-	Yes	INIT	DJD
↓	0814	D	100%	98.7	-	Yes	INIT	DJD
14/08/14	1819	A	4.01	4.02	-	NO	FINAL	DJD
	1820	B	7.00	7.01	-	NO	FINAL	DJD
	1822	C	1000	1001	-	NO	FINAL	DJD
↓	1826	D	100%	99.4	-	NO	FINAL	DJD
14/08/15	0808	A	4.01	4.03	-	NO	INIT	DJD
	0810	B	7.00	7.02	-	NO	INIT	DJD
	0811	C	1000	1003	-	NO	INIT	DJD
↓	0815	D	100%	99.1	-	NO	INIT	DJD
14/08/15	1042	A	4.01	4.02	-	NO	FINAL	DJD
	1044	B	7.00	7.03	-	NO	FINAL	DJD
	1046	C	1000	1004	-	NO	FINAL	DJD
	1050	D	100%	98.7	-	NO	FINAL	DJD

8/13/14 NASA-KSC M505

-DJP

0700	mob to site, stop by 2 walmarts for sampling umbrella, pick up drum
1015	on site, safety meeting, cal meters
1112	MW0055-025.0-20140813 Sampled
1147	MW0052-010.0-20140813 Sampled
1223	MW0051-025.0-20140813 Sampled
1302	MW0033-025.0-20140813 Sampled
1333	MW0032-035.0-20140813 Sampled
1402	MW0025-025.0-20140813 Sampled
1457	MW0026-035.0-20140813 Sampled
1546	MW0049-027.5-20140813 Sampled.
•	Setup @ MW0018 + MW0021
•	phase II lightning @ 16:08
•	phase II Terminated @ 18:09
1827	MW0017-025.0-20140813 Sampled
1851	MW0020-036.0-20140813 Sampled
1900	post cal, load truck, Dump water
1930	off site

12.5 no lunch break taken

1608 phase II lightning.

8/14/14 NASA-KSC M505

-DJP

0800	on site, safety meeting, cal meters
0917	MW0045-034.5-20140814 sampled
0958	MW0046-010.0-20140814 Sampled
1039	MW0038-025.0-20140814 Sampled
1125	MW0041-025.0-20140814 Sampled
1159	MW0042-035.0-20140814 Sampled
1252	MW0048-027.5-20140814 Sampled
•	phase II lightning @ 13:28
•	Purging @ MW0013 stopped, Terminated 1355
1422	MW0013-025.0-20140814 Sampled
1500	MW0039-032.5-20140814 Sampled
1521	MW0040-035.0-20140814 Sampled
@	Phase II lightning (all areas)
1730	phase II Terminated
1811	MW0044-027.5-20140814 Sampled
•	post cal, Dump water, close PAK
1845	off site

10.7 no lunch break taken

8/15/14 NASA MSFC

-DOD

0800	On site, safety sheet, cal meters
0847	MW0023-025.0-20140815 sampled
0919	MW0024-035.0-20140815 sampled
0957	MW0035-025.0-20140815 sampled
1029	MW0036-035.0-20140815 sampled
1040	~~Off site~~ Dump water, post cal
1050	Off site
1120	Ship samples, Demob
1330	End of Day

(5.5) see lunch break TAKEN

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 1

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASD - M505		**Project Location:** KSC - NASA	
Date: 8/13/14	**Time:** 1015	**Conducted by:** David Dankert	**Signature/Title:** Tech 5
Client: NASA	**Client Contact:** Harry Plaza	**Subcontractor companies:** —	

Topics for the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Sample Wells 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Are there any hazardous materials used on this project that will be brought to ARCADIS operations? ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Is a permit required for the work? Check all that apply:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Review previous incidents / lessons learned, check if yes:

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☐ Staff knows gathering points?

Comments: _____

Review hazards / controls / precautions for the day, check if yes:

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) Slips, trips, falls	☒ Motion (i.e., traffic, moving water) (L M H) Cones	☐ Mechanical (i.e., augers, motors) (L M H)	
☐ Electrical (i.e., utilities, lightning) (L M H)	☐ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H) sunscreen, breaks	
☒ Chemical (i.e., fuel, acid, paint) (L M H) preservative - H&S	☒ Biological (i.e., ticks, poison ivy) (L M H) Deet	☒ Radiation (i.e., alpha, sun, laser) (L M H) sunscreen, hydrate	
☐ Sound (i.e., machinery, generators) (L M H)	☒ Personal (i.e., alone at night, not fit) (L M H) Cell phone	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)	

Additional HASP Requirements

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control Hazards: Review the hazards that will be encountered for the day(s). Review the HASP, applicable JLAs and work permits. Discuss and document any additional control procedures.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name (Print)	Company	Date	Time	
David Dankert	Arcadis	8/13/14	1015	1930

Important Emergency Information

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3644.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3644 and then Corp Legal at 1.720.344.3766.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.0556 and Corp H&S at 1.720.344.3500

Visitor Records / Sign In / Sign Out

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned uncertain about health & safety or if anyone identifies hazard or additional mitigation not recorded in the project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessment or HASP as needed.

I will not assist a subcontractor or other party with work unless it is absolutely necessary and then only if I have done TRACK and I have thoroughly controlled hazard.

Post Daily Activities Review - Review at end of day or before next day's work. (Check those applicable and explain)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep this in a safe place!

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxx.xxxx.xxxxx - dd/mm/year*

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA MSDS		**Project Location:** NASA KSC	
Date: 8/14/14	**Time:** 0800	**Conducted by:** David D	**Signature/Title:** Tech 5
Client: NASA		**Client Contact:** HARRY OLIVER	**Subcontractor companies:** —

Think through the Tasks (list the tasks for the day):

1. Sample wells
2.
3.
4.
5.
6.

If there are none, write "None" here: ☐

If yes, describe them here: _____

How will they be controlled? _____

Permits required for the day's work:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discussion/review questions to ask yourself, everyday, check if yes:

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☐ Staff knows gathering points?

Comments: _____

Identify hazards and potential exposures associated with the day's work:

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) slips/falls	☒ Motion (i.e., traffic, moving water) (L M H) Cars	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☐ Pressure (i.e., gas cylinders, voids) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H) Hcl,	☒ Biological (i.e., ticks, poison ivy) (L M H) Deet	☒ Radiation (i.e., alpha, gamma, laser) (L M H)
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards: Review the hazards identified on page 1 and the HASP. Identify the controls that will be implemented for the day's work. Check the boxes below. Discuss any additional control measures.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Time In	Time Out
David Dankel / Arcadis / [signature]	0800	1830

Important Information for Site Staff:

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3766.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.379.0566 and Corp H&S at 1.720.344.3600

Site Entry and Exit Log:

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned, uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions, the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessment(s) in the HASP as needed.

I will not assist a subcontractor or other party with work unless it is absolutely necessary and then only if I have done TRACK and I have thoroughly considered the hazard.

Post Daily Activities Review: Review at end of day's activities/work. (Check those applicable and explain)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work Interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S Emergency Phone Numbers Handy

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxx.xxxx.xxxxx - dd/mm/year*

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: M505 - NASA		**Project Location:** KSC - NASA	
Date: 8/15/14	**Time:** 0800	**Conducted by:** DAVID DANKEL	**Signature/Title:** Tech
Client: NASA		**Client Contact:** HARRY PLAZA	**Subcontractor companies:** —

Planning the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Sample wells 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Have there been any changes to the project scope that have not been reported to ARCADIS previously? ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Permits required for the day's work activities:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height	_____	☐ Confined Space	_____
☐ Energy Isolation (LOTO)	_____	☐ Excavation/Trenching	_____	☐ Hot Work	_____
☐ Mechanical Lifting Ops	_____	☐ Overhead & Buried Utilities	_____	☐ Other permit	_____

Discussion Items:

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☐ Staff knows gathering points?

Comments: _____

Review Hazards of Project Activities (Circle the hazards that apply to the day's activities and review the hazard category)

☒ Gravity (i.e., ladder, scaffold, trips)	(L M H)	☒ Motion (i.e., traffic, moving water)	(L M H)	☐ Mechanical (i.e., augers, motors)	(L M H)
☐ Electrical (i.e., utilities, lightning)	(L M H)	☐ Pressure (i.e., gas cylinders, wells)	(L M H)	☒ Environment (i.e., heat, cold, ice)	(L M H)
☒ Chemical (i.e., fuel, acid, paint)	(L M H)	☒ Biological (i.e., ticks, poison ivy)	(L M H)	☒ Radiation (i.e., alpha, sun, laser)	(L M H)
☐ Sound (i.e., machinery, generators)	(L M H)	☐ Personal (i.e. alone, night, not fit)	(L M H)	☐ Driving (i.e. car, ATV, boat, dozer)	(L M H)

Continue Tailgate Meeting Form

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control Measures (Identify the control measures that will be implemented for the day. Review HASP, applicable JLAs and Procedures. Develop site-specific JLAs as additional control procedures)

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *See statements below*)

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☐ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☐ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☐ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name (Company)

David Dankel / Arcadis

Time In	Time Out	Initials
0800		

Important Information and Instructions

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.9155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3766.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9566 and Corp H&S at 1.720.344.3500

Visitor Name (Company) and Affiliation

	In Out
	In Out
	In Out
	In Out

I will STOP the job any time anyone is concerned uncertain about health & safety or if anyone identifies hazard or additional mitigation not recorded in the project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessment/ HASP as needed.

I will not assist a subcontractor or other party with work unless it is absolutely necessary and then only I have done TRACK and I have thoroughly controlled hazard.

Post Daily Activities Review - *Review at end of day or before next day's work. (Check those applicable and explain)*

☐ Lessons learned and best practices learned today: _____

☐ Incidents that occurred today: _____

☐ Any Stop Work Interventions today? _____

☐ Corrective/Preventive Actions needed for future work: _____

☐ Any other H&S issues: _____

Keep this in mind

WorkCare - 1.800.455.9155
Near Loss Hotline - 1.866.242.4304

DRUM INVENTORY LOG

Contractor: ARCADIS

Site	Generation Date	Media	Source	o/o Full	Pallet 10 (Bar Code)	Drum Bar Code& (Number)	NASA Contact	Location of Pallet	IDW Source	Drum pH	Maximum Concentrations (ug/L)	Tie Down Strap Yes/ No
M505	5/22/14 - 5/25/14	GW	GW Sampling	85	177813	196988	Harry Plaza	South of POL (M7-554)	Annual Sampling of MWs	7.52	TCE: 18 ug/l; cDCE: 240 ug/l; VC: 87 ug/l; Xylenes:	Yes
	08/06/2014	GW	AS well developme	85		196989			AS24, AS25, AS15, AS14, AS17, AS18 development water	7.5		
	08/06/2014	GW	AS well developme	~~20~~ 85 %		196990			AS19 and AS20 development water, GWS, MW's	8		

NOTES:

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA - M505	SITE LOCATION: (M505) Cape Canaveral, FL		
WELL NO: MW0013	SAMPLE ID: M505-MW0013-025.5-20141124	DATE: 11/24/14	

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 6.35	PURGE PUMP TYPE OR BAILER: Peri pump

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.0014 gallons/foot X 40 feet) + .132 gallons = 0.19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1344	PURGING ENDED AT: 1402	TOTAL VOLUME PURGED (gallons): 0.90

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1350	0.30	0.30	0.05	6.38	6.66	28.14	2373	2.98	0.85	clear	None	108.8
1354	0.20	0.50	0.05	6.38	6.69	28.16	2357	2.73	1.17	clear	None	107.5
1358	0.20	0.70	0.05	6.38	6.72	28.17	2345	2.66	1.24	clear	None	106.7
1402	0.20	0.90	0.05	6.38	6.74	28.20	2338	2.58	0.99	clear	None	105.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1403	SAMPLING ENDED AT: 1405
PUMP OR TUBING DEPTH IN WELL (feet): 25.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW00 13	3	CG	40ml	HCl	—	—	8260	RFPP	~200

REMARKS: Sampled @ 1403

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL
WELL NO: ML-0055	SAMPLE ID: MW505-MW0055-025.0-20141124 DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.94	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.00~~4~~ gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1348	PURGING ENDED AT: 1407	TOTAL VOLUME PURGED (gallons): 0.95

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1358	0.5	0.5	0.05	7.17	6.87	25.7	1909	0.37	1.7	Clear	None	
1401	0.15	0.65		7.19	6.91	25.8	1907	0.30	1.7			
1404	0.15	0.80		7.19	6.93	25.9	1898	0.28	1.6			
1407	0.15	0.95		7.20	6.95	26.0	1884	0.27	1.8			-47

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW - ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1409	SAMPLING ENDED AT: 1413
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
ML-0055	3	CG	40mL	HCl	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA- MSOS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0052	SAMPLE ID:	MSOS-MW-0052-010.0-20141124
		DATE:	11/24/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16		2.03	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 25 feet) + 0.1 gallons = 0.14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
10	10	1424	1438	0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1429	0.25	0.25	0.05	7.09	5.42	27.6	591	0.62	13	Clear	None	
1432	0.15	0.40		7.10	5.34	27.7	335	0.58	12			
1435	0.15	0.55		7.10	5.31	27.6	332	0.52	12			
1438	0.15	0.70		7.10	5.29	27.5	328	0.15	12			+96

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DDW / ARCADIS		1440	1444

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
10	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0052	3	CG	40 mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: (M505) Cape Canaveral, FL
WELL NO: MW0039	SAMPLE ID: M505-MW0039-032.5-20141124 DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.35	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (0.0014 gallons/foot X 50 feet) + .132 gallons = 0.20 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
32.5'	32.5'	1435	1450	0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1441	0.30	0.30	0.05	5.58	6.79	29.01	1482	4.98	0.75	Clear	None	87.1
1444	0.15	0.45	0.05	5.58	6.72	28.85	1477	4.59	0.68	Clear	None	84.5
1447	0.15	0.60	0.05	5.58	6.70	29.03	1478	4.03	0.59	Clear	None	83.3
1450	0.15	0.75	0.05	5.58	6.69	29.17	1479	3.77	0.55	Clear	None	82.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1451	SAMPLING ENDED AT: 1453
PUMP OR TUBING DEPTH IN WELL (feet): 32.5'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-00 39	3	CG	40ml	HCl	—	—	8260	RFPP	~ 200

REMARKS: Sampled @ 1451

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL.
WELL NO: MW-0051	SAMPLE ID: M505-MW0051-025.0-20141124 DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.88	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1457	PURGING ENDED AT: 1511	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1502	0.25	0.25	0.05	7.39	7.24	26.1	1569	0.49	3.6	Clear	none	
1505	0.15	0.40	|	7.39	7.13	26.1	1579	0.60	3.2	|	|	|
1508	0.15	0.55	|	7.37	7.07	26.1	1578	0.54	2.9	|	|	|
1511	0.15	0.70	|	7.37	7.05	26.0	1589	0.46	3.6	|	|	-80

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: PJW - ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1513	SAMPLING ENDED AT: 1517
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0051	3	CG	40mL	HCL	—	—	8260	APP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505		SITE LOCATION: Cape Canaveral, FL.	
WELL NO: MW-0033	SAMPLE ID: M505-MW0033-025.0-20141124		DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 12.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.88	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1531	PURGING ENDED AT: 1545	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1536	0.25	0.25	0.05	8.03	6.70	26.3	1901	1.22	2.3	clear	none	
1539	0.15	0.40	|	8.03	6.70	26.3	1905	1.14	2.5	|	|	|
1542	0.15	0.55	|	8.03	6.70	26.2	1905	1.06	3.2	|	|	|
1545	0.15	0.70	|	8.03	6.71	26.2	1905	0.99	2.8	|	|	+131

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJL - ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1547	SAMPLING ENDED AT: 1551
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
AL-0033	3	CG	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA	SITE LOCATION: (M505) Cape Canaveral, FL	
WELL NO: MW0040	SAMPLE ID: M505-MW00040-02502014112H	DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.73	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (0.0014 gallons/foot X 40 feet) + .132 gallons = 0.19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.0	PURGING INITIATED AT: 1536	PURGING ENDED AT: 1557	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1542	0.30	0.30	0.05	5.80	6.71	28.68	1454	0.49	0.92	Clear	None	102.3
1545	0.15	0.45	0.05	5.80	6.71	28.72	1461	0.44	0.73	Clear	None	99.9
1548	0.15	0.60	0.05	5.80	6.70	28.76	1467	0.42	0.66	Clear	None	98.5
1551	0.15	0.75	0.05	5.80	6.71	28.72	1464	0.37	0.63	Clear	None	96.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1552	SAMPLING ENDED AT: 1554
PUMP OR TUBING DEPTH IN WELL (feet): 25.0	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0040	3	CG	40	HCl	—	—	8260	RFPP	~200

REMARKS: Sampled @ 1552

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - MSOS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0032	SAMPLE ID:	MSOS-MW0032-035-20141124 DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	22.5 feet to 37.5 feet	7.99	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	1557	1611	0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1602	0.25	0.25	0.05	8.59	6.82	26.2	1742	1.23	7.8	clear	none	
1605	0.15	0.40		8.58	6.81	26.1	1746	0.90	6.6			
1608	0.15	0.55		8.58	6.81	26.0	1750	0.81	5.5			
1611	0.15	0.70		8.58	6.81	26.0	1753	0.73	3.5			+134

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW ARCADIS		1613	1617

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35			

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0032	3	CG	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA	SITE LOCATION: (M505) Cape Canaveral, FL
WELL NO: MW0044	SAMPLE ID: M505-MW0044-227.5'20141124
DATE: 11/24/14	

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.13	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (0.0014 gallons/foot X 40 feet) + .132 gallons = 0.19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5'	PURGING INITIATED AT: 1600	PURGING ENDED AT: 1615	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1606	0.30	0.30	0.05	5.27	6.73	27.39	2461	1.41	2.89	clear	None	122.4
1609	0.15	0.45	0.05	5.27	6.69	27.52	2460	1.20	3.13	clear	None	118.9
1612	0.15	0.60	0.05	5.27	6.67	27.58	2462	1.01	3.02	Clear	None	123.8
1615	0.15	0.75	0.05	5.27	6.65	27.46	2465	0.92	2.86	Clear	None	120.6

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1616	SAMPLING ENDED AT: 1618
PUMP OR TUBING DEPTH IN WELL (feet): 27.5'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0044	3	CG	40ml	HCl	–	–	8260	RFPP	~ 200

REMARKS: Sampled @ 1616

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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GROUNDWATER SAMPLING LOG

SITE NAME: NASA-MSDS	SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-0025	SAMPLE ID: MSDS-MW0025-025.0-20141124	DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.81	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1637	PURGING ENDED AT: 1651	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1642	0.25	0.25	0.05	7.95	6.61	25.7	3050	0.67	2.0	Clear	none	|
1645	0.15	0.40	|	7.95	6.62	25.6	3110	0.60	2.1	|	|	|
1648	0.15	0.55	|	7.95	6.62	25.5	3130	0.54	2.0	|	|	|
1651	0.15	0.70	|	7.95	6.63	25.4	3130	0.50	1.6	|	|	72

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW - ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1653	SAMPLING ENDED AT: 1657
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0025	3	CG	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION: (M505) Cape Canaveral, FL	
WELL NO: MW0041	SAMPLE ID: M505-MW0041-025.0 20141124	DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.04	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (0.0014 gallons/foot X 40 feet) + .132 gallons = 0.19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.0	PURGING INITIATED AT: 1640	PURGING ENDED AT: 1655	TOTAL VOLUME PURGED (gallons): 0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1646	0.30	0.30	0.05	6.14	6.47	26.56	2448	0.53	9.51	Clear	None	-34.2
1649	0.15	0.45	0.05	6.14	6.42	26.53	2522	0.46	8.35	Clear	None	-44.8
1652	0.15	0.60	0.05	6.14	6.39	26.48	2606	0.35	8.09	Clear	None	-50.7
1655	0.15	0.75	0.05	6.14	6.40	26.43	2614	0.32	7.98	Clear	None	-51.5

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1656	SAMPLING ENDED AT: 1658
PUMP OR TUBING DEPTH IN WELL (feet): 25.00'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MWDO 41	3	CG	40ml	HCl	—	—	8260	RFPP	~200

REMARKS: Sampled @ 1656

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	MASA-M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0026	SAMPLE ID:	M505-MW0026-0350-20141124
		DATE:	11/24/14

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	32.5 feet to 37.5 feet	7.80	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	1702	1716	0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1707	0.25	0.25	0.05	8.72	6.76	25.3	3280	0.79	2.3	Clear	None	
1710	0.15	0.40	|	8.75	6.76	25.2	3280	0.57	2.0	|	|	|
1713	0.15	0.55	|	8.76	6.76	25.2	3280	0.50	1.9	|	|	|
1716	0.15	0.70	|	8.76	6.76	25.1	3280	0.41	1.7	|	|	+35

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DVC ARCADIS		1718	1722

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0026	3	AG	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

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GROUNDWATER SAMPLING LOG

SITE NAME: NASA		SITE LOCATION: (M505) Cape Canaveral, FL	
WELL NO: MW0042	SAMPLE ID: M505-MW0042-035.0 20141124		DATE: 11/24/14

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 6.10	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.0014 gallons/foot X 50 feet) + 1132 gallons = 0.20 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35.00'	35.00'	1719	1734	0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1725	0.30	0.30	0.05	6.35	6.49	26.03	2651	0.28	10.1	Clear	None	-15.6
1728	0.15	0.45	0.05	6.35	6.49	25.98	2670	0.25	8.74	Clear	None	-16.7
1731	0.15	0.60	0.05	6.35	6.49	25.96	2672	0.23	8.14	Clear	None	-18.6
1734	0.15	0.75	0.05	6.35	6.50	25.93	2675	0.22	7.95	Clear	None	-19.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S): Kevin Kearney	SAMPLING INITIATED AT: 1735	SAMPLING ENDED AT: 1737
PUMP OR TUBING DEPTH IN WELL (feet): 35.00'	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW 00 42	3	CG	40ml	HCl	—	—	RFA 8260	RFPP	~ 200

REMARKS: Sampled @ 1735

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	SITE LOCATION:	
WELL NO:	SAMPLE ID:	DATE:

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-MSDS		SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW0035	SAMPLE ID: MSDS-MW0035-025-0 20141125		DATE: 11/25/14

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 3.31	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1014	PURGING ENDED AT: 1028	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1019	0.25	0.25	0.05	3.48	6.42	24.0	1905	1.37	2.6	Clear	none	
1022	0.15	0.40		3.48	6.46	24.0	1907	1.31	2.5			
1025	0.15	0.55		3.48	6.50	24.0	1902	1.23	2.2			
1028	0.15	0.70		3.45	6.52	24.0	1901	1.17	2.3			216

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1030	SAMPLING ENDED AT: 1034
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0035	3	CG	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA	SITE LOCATION:	(M505) Cape Canaveral, FL
WELL NO:	MW0023	SAMPLE ID:	M505-MW0023-025.0 20141125
DATE:	11/25/14		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	5.29	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (0.0014 gallons/foot X 50 feet) + .132 gallons = 0.20 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25.00'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25.00'	PURGING INITIATED AT:	1015	PURGING ENDED AT:	1030	TOTAL VOLUME PURGED (gallons):	0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1021	0.30	0.30	0.05	5.43	6.39	24.85	2562	0.99	6.99	clear	None	44.5
1024	0.15	0.45	0.05	5.43	6.41	24.79	2561	0.84	5.29	clear	None	47.3
1027	0.15	0.60	0.05	5.44	6.43	24.84	2559	0.85	5.15	clear	None	53.2
1030	0.15	0.75	0.05	5.44	6.45	24.87	2554	0.88	4.97	clear	None	51.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	Kevin Kearney ARCADIS	SAMPLER(S) SIGNATURE(S):	Kevin Kearney	SAMPLING INITIATED AT:	1031	SAMPLING ENDED AT:	1033
PUMP OR TUBING DEPTH IN WELL (feet):	25.00'	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW 00 23	3	CG	40ml	HCl	—	—	8260	RFPP	~ 200

REMARKS: Sampled @ 1031

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-MSDS	SITE LOCATION: Cape Canaveral, FL		
WELL NO: MW-0036	SAMPLE ID: MSDS-MW-0036-035.0-20141125	DATE: 11/25/14	

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 2.93	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 65 feet) + 0.1 gallons = 0.19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1041	PURGING ENDED AT: 1055	TOTAL VOLUME PURGED (gallons): 0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1046	0.25	0.25	0.05	3.12	6.89	24.5	2660	1.37	6.4	Clear	None	↓
1049	0.15	0.40	↓	3.13	6.88	24.4	2660	1.29	5.2	↓	↓	↓
1052	0.15	0.55	↓	3.13	6.89	24.5	2650	1.22	3.5	↓	↓	↓
1055	0.15	0.70	↓	3.12	6.90	24.6	2650	1.14	3.2	↓	↓	+198

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1057	SAMPLING ENDED AT: 1101
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0036	3	C6	40mL	HCL	—	—	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA – M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW0024	SAMPLE ID:	M505: MW0024-035.0 20141125
DATE:	11/25/14		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	32.5 feet to 37.5 feet	5.20	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.0014 gallons/foot X 60 feet) + .132 gallons = .022 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35.00'	35.00'	1050	1105	0.75

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1056	0.30	0.30	0.05	6.06	7.09	25.71	2927	6.80	10.9	Clear	None	83.6
1059	0.15	0.45	0.05	6.06	7.08	25.76	2933	6.65	8.07	Clear	None	84.8
1102	0.15	0.60	0.05	6.06	7.06	25.79	2935	6.61	7.72	Clear	None	85.6
1105	0.15	0.75	0.05	6.06	7.08	25.83	2938	6.53	7.61	Clear	None	86.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Kevin Kearney ARCADIS	Kevin Kearney	1106	1108

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35.00'	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0024	3	CG	40ml	HCl	—	—	8260	RFPP	~200

REMARKS: Sampled @ 1106

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	MASA-M505	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	MW0049	SAMPLE ID:	M505-MW0049-027.5-20141125
DATE:	11/25/14		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	20 feet to 35 feet	7.35	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
27.5	27.5	1116	1130	0.70

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1121	0.25	0.25	0.05	7.43	6.66	25.0	1551	0.70	2.2	clear	none	
1124	0.15	0.40		7.43	6.67	25.0	1553	0.64	2.1			
1127	0.15	0.55		7.43	6.67	25.0	1554	0.57	2.9			
1130	0.15	0.70		7.43	6.68	25.0	1553	0.49	2.6			472

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
Dale ARCADIS		1133	1137

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
27.5	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0049	3	CG	40mL	HCL	–	–	8260	PP	~80

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI-556 **INSTRUMENT #** 06G2036

PARAMETER: *[check only one]*

☐ TEMPERATURE ☒ CONDUCTIVITY ☐ SALINITY ☒ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☒ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.00 D. 100%
Standard B 7.00
Standard C 1000

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
24/11/24	1315	A	4.00	4.00	0	Yes	Init	KSK
	1316	B	7.00	7.00	0			
	1319	C	1000	1000	0			
	1322	D	100%	99.8	0.2			
24/11/24	1746	A	4.00	4.09	0.9	No	Cont	KSK
	1747	B	7.00	7.07	0.7			
	1748	C	1000	981	1.9			
	1750	D	100%	94.8	5.2			
24/11/25	0939	A	4.00	4.00	0	Yes	Init	KSK
	0940	B	7.00	7.00	0			
	0941	C	1000	1000	0			
	0942	D	100%	100.5%	0.5			
24/11/25	1140	A	4.00	4.06	0.60	No	Cont.	KSK
	1141	B	7.00	7.07	0.70			
	1142	C	1000	1020	2.00			
	1144	D	100%	98.9	1.1%			

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) Hach 2100 Q **INSTRUMENT #** 13100C028717

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☒ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

3/16
00

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 20 D) 10
Standard B 100
Standard C 800

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
14/11/24	1307	A	20	19.70	0.30	Yes	Init	KSK
	1308	B	100	100	0	Yes	Init	KSK
	1309	C	800	799	1.0	Yes	Init	KSK
	1310	D	10	10.3	0.30	Yes	Init	KSK
14/11/24	1751	A	20	20.5	0.50	No	Cont.	KSK
	1752	B	100	101	1.00	No	Cont.	KSK
	1753	C	800	798	2.00	No	Cont.	KSK
	1754	D	10	10.2	0.20	No	Cont.	KSK
14/11/25	0944	A	20	19.90	0.10	Yes	Init	KSK
	0945	B	100	100	0	Yes	Init	KSK
	0946	C	800	799	1.00	Yes	Init	KSK
	0947	D	10	10.1	0.10	Yes	Init	KSK
14/11/25	1135	D	10	10.2	0.20	No	Cont	KSK
	1136	A	20	20.4	0.40	No	Cont	KSK
	1137	B	100	101	1.00	No	Cont	KSK
	1138	C	800	802	2.00	No	Cont	KSK

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) LaMotte 2020 **INSTRUMENT #** 3042-1102

PARAMETER: [check only one]

☐ TEMPERATURE ☑ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0 NTUs

Standard B 10 NTUs

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA-	11/25/14	0940	A	0	0.0	0.0	Y	INT	DJW
M505		0942	B	10	10.0	0.0	Y	INT	DJW
		0941	A	0	0.0	0.0	N	ICV	DJW
		0943	B	10	10.2	2.0	N	ICV	DJW
		1144	A	0	0.0	0.0	N	CCV	DJW
		1145	B	10	10.4	4.0	N	CCV	DJW

INSTRUMENT (MAKER/MODEL#) Oakton Con 6 Acorn **INSTRUMENT #** 1425499

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☑ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 500 µs

Standard B 1000 µs

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	11/25/14	0944	A	500 µs	500	0.0	Y	INT	DJW
M505		0948	B	1000 µs	1000	0.0	Y	INT	DJW
		0946	A	500 µs	503	0.6	N	ICV	DJW
		0950	B	1000 µs	1000	0.0	N	ICV	DJW
		1147	A	500 µs	519	3.8	N	CCV	DJW
		1149	B	1000 µs	990	1.0	N	CCV	DJW

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) Oakton pH 6 Acorn **INSTRUMENT #** 1396936

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☑ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 7.00 Standard pH units @

Standard B 4.00 Standard pH units @

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min) Temp (°C)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	11/25/14	0951 23.1	A	7	7.00	0.0	Y	INT	DJW
M505		0955 23.1	B	4	4.00	0.0	Y	INT	DJW
		0953 23.2	A	7	7.01	0.1	N	ICV	DJW
		0957 23.2	B	4	4.02	0.5	N	ICV	DJW
		1156 24.4	A	7	7.08	1.1	N	CCV	DJW
		1152 24.5	B	4	4.10	2.5	N	CCV	DJW

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) LaMotte 2020 **INSTRUMENT #** 3042-1102

PARAMETER: [check only one]

☐ TEMPERATURE ☑ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0 NTUs
Standard B 10 NTUs
Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	11/24/14	1314	A	0	0.0	0.0	Y	INT	DJW
M-505		1316	B	10	10.0	0.0	Y	INT	DJW
		1315	A	0	0.0	0.0	N	ICV	DJW
		1317	B	10	10.4	4.0	N	ICV	DJW
		1725	A	0	0.0	0.0	N	CCV	DJW
		1726	B	10	10.6	6.0	N	CCV	DJW

INSTRUMENT (MAKER/MODEL#) Oakton Con 6 Acorn **INSTRUMENT #** 1425490

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☑ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 500 µs
Standard B 1000 µs
Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	11/24/14	1318	A	500 µs	500	0.0	Y	INT	DJW
M505		1322	B	1000 µs	1000	0.0	Y	INT	DJW
		1320	A	500 µs	502	0.4	N	ICV	DJW
		1324	B	1000 µs	1004	0.4	N	ICV	DJW
		1727	A	500 µs	511	2.2	N	CCV	DJW
		1729	B	1000 µs	1009	0.9	N	CCV	DJW

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) Oakton pH 6 Acorn **INSTRUMENT #** 1398936

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☑ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 7.00 Standard pH units @
Standard B 4.00 Standard pH units @
Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min) Temp (°C)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	11/24/14	1325 26.1	A	7	7.00	0.0	Y	INT	DJW
M505		1329 26.2	B	4	4.00	0.0	Y	INT	DJW
		1327 26.1	A	7	7.01	0.1	N	ICV	DJW
		1331 26.4	B	4	4.06	1.5	N	ICV	DJW
		1728 29.7	A	7	7.09	1.3	N	CCV	DJW
		1731 29.0	B	4	4.10	2.5	N	CCV	DJW

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI-55 **INSTRUMENT #** 13A 102413

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 100% Ambient Air

Standard B _____

Standard C _____

DATE (yy/mm/dd)	TIME (military)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
14/11/26	0825	A	100%	99.7	0.3	Y	Init	DJL
"	1255	A	100%	93.5	6.5	N	Cont	DJL

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name: M505 - MW	Project Number:
Project Manager: Scott Stark	Email Address: Scott.Stark@arcadis-us.com
Company/Address: Arcadis 1601 Rocky Pt Dr. #600 Tampa FL 33607	
Phone #: 813-903-3160	FAX #: 813-903-7115
Sampler's Signature: Kevin Kearney	Sampler's Printed Name: Kevin Kearney

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 0

NUMBER OF CONTAINERS: 8260

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX			REMARKS/ ALTERNATE DESCRIPTION
M505-MW0013-025.5-20141124		11/24/14	1403	GW	3	3	
M505-MW0055-025.0-20141124		11/24/14	1409	GW	3	3	
M505-MW0052-018.0-20141124		11/24/14	1440	GW	3	3	
M505-MW0039-025.5-20141124		11/24/14	1451	GW	3	3	
M505-MW0051-025.0-20141124		11/24/14	1513	GW	3	3	
M505-MW0033-025.0-20141124		11/24/14	1547	GW	3	3	
M505-MW0040-025.0-20141124		11/24/14	1552	GW	3	3	
M505-MW0032-035.0-20141124		11/24/14	1613	GW	3	3	
M505-MW0044-023.5-20141124		11/24/14	1616	GW	3	3	
M505-MW0025-025.0-20141124		11/24/14	1653	GW	3	3	
M505-MW0041-025.0-20141124		11/24/14	1656	GW	3	3	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

_____ STANDARD

REQUESTED FAX DATE

_____

REQUESTED REPORT DATE

_____

REPORT REQUIREMENTS

_____ I. Results Only

_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

_____ III. Results + QC and Calibration Summaries

_____ IV. Data Validation Report with Raw Data

_____ V. Specialized Forms / Custom Report

Edata _____Yes _____No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: David Wells	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/25/14 1515	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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PAGE 1 OF 2

SR#

CAS Contract

Project Name: NASA - M505	Project Number:
Project Manager: Scott Starr	Email Address: scott.starr@arcadis-us.com
Company/Address: Arcadis 1104 Renaissance Dr. Ste 600 Tampa FL 33637	
Phone #: 813-903-3100	FAX #: 813-903-9115
Sampler's Signature: Kevin Kearney	Sampler's Printed Name: Kevin Kearney

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 8260

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	REMARKS/ ALTERNATE DESCRIPTION
M505-MW0026-035.0-20141124		11/24/14	1718	GW	3	3	
M505-MW0042-035.0-20141124		11/24/14	1735		3	3	
M505-MW0035-025.0-20141125		11/25/14	1030		3	3	
M505-MW0023-035.0-20141125		11/25/14	1031		3	3	
M505-MW0036-035.0-20141125		11/25/14	1059		3	3	
M505-MW0024-035.0-20141125		11/25/14	1106		3	3	
M505-MW0049-027.5-20141125		11/25/14	1133		3	3	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
____ V. Specialized Forms / Custom Report
Edata ____Yes ____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	REGEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: David Welch	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm	Firm	Firm	Firm	Firm
Date/Time: 11/25/14 1515	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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ARCADIS, Inc

LEVINE · FRICKE
ENGINEERS, HYDROGEOLOGISTS & APPLIED SCIENTISTS

Water-Level Measurements

LF Project No.: T0614021.0003,00002 Date: 2/23/15

Site Name: MW-54 - MW-58 Time: 1100 - 1100

General Observations:

Field Personnel: DOD - DOW

A	B	C	D	E
Well I.D.	Well (TOC) Elevation (ft.)	Depth to Water Measurement (ft.)	Water Level Elevation (B-C) (ft.)	DTW Remarks
MW-54		7.24	MW-37	5.92
MW-55		6.83	MW-38	5.98
MW-52		6.88	MW-3I	6.45
MW-51		6.66	MW-44	5.00
MW-34		7.35	MW-40	5.54
MW-33		7.67	MW-39	5.18
MW-32		7.78	MW-13IS	6.25
MW-49		7.97	MW-1	6.00
MW-36		3.26	MW-12	5.56
MW-35		3.72	MW-7S	5.30
MW-25		7.50	MW-7I	5.84
MW-26		7.53	MW-10I	5.91
MW-50		7.78	MW-47	5.98
MW-53		5.67	MW-45	5.70
MW-30		7.02	MW-46	5.70
MW-14S		5.86	MW-38	5.62
MW-59		3.62	MW-9S	6.59
MW-28		2.48	MW-9IS	5.95
MW-56		3.24	MW22	6.10
MW-57		3.71	MW-11S	5.41
MW-58		2.94	MW-27	6.30
MW-5I		5.82	MW-21	2.68
MW-5S		5.84	MW-29	4.22
MW-48		6.80		
MW-19		5.98		
MW-20		5.77		
MW-41		5.78		
MW-42		5.80		
MW-24		5.51		
MW-23		5.57		

Equipment Used (including I.D. Number): Solinst

Initials: JAP/JMW Date: 2/23/15

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-52	SAMPLE ID:	M505-MW0052-010.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	1	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	6.89	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15 feet − 6.89 feet) X 0.04 gallons/foot = 0.32 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	8.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	8.5	PURGING INITIATED AT:	1504	PURGING ENDED AT:	1524	TOTAL VOLUME PURGED (gallons):	2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1515	1.1	1.1	0.10	7.08	5.19	21.3	261	0.32	17	L. Brown	None	
1518	0.3	1.4		7.08	5.17	21.3	252	0.31	15			
1521	0.3	1.7		7.08	5.11	21.3	249	0.31	14			
1524	0.3	2.0		7.08	5.10	21.3	248	0.31	14			+154

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	OHL / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1526	SAMPLING ENDED AT:	1529
PUMP OR TUBING DEPTH IN WELL (feet):	8.5	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N (replaced))		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-52	3	G	40mL	HCL	[redacted]	—	8260B	RFPP	~80

REMARKS: Sampled @ (1520) / pdc: 2 vials have ~4mm bubbles, could not remove

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - M505	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	ML-35	SAMPLE ID:	MW0035.025.0 - 20150224 DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16"	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	3.74	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	0911	PURGING ENDED AT:	0928	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0919	0.40	0.40	0.05	3.99	6.52	22.8	2590	0.48	7.0	clear	none	
0922	0.15	0.55	"	3.99	6.54	22.8	2590	0.51	5.1	"	"	"
0925	0.15	0.70	"	3.99	6.55	22.9	2600	0.46	3.8	"	"	"
0928	0.15	0.85	"	3.99	6.56	23.0	2610	0.48	3.9	"	"	422

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DJL/LFR	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0930	SAMPLING ENDED AT:	0937
PUMP OR TUBING DEPTH IN WELL (feet):	25	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
ML-35	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 0930

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA- MSDS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-36	SAMPLE ID:	MW0036.035.0-20150224
		DATE:	2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	32.5 feet to 37.5 feet	3.28	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (.0014 gallons/foot X 60 feet) + 0.1 gallons = 0.18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	0946	1003	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0954	0.40	0.40	0.05	3.51	6.86	22.9	1978	0.85	2.1	Clear	none	
0957	0.15	0.55	"	3.50	6.88	23.3	1924	0.71	1.8	"	"	"
1000	0.15	0.70	"	3.50	6.88	23.2	1904	0.68	1.2	"	"	"
1003	0.15	0.85	"	3.50	6.89	23.3	1889	0.56	0.7	"	"	+10

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW / Arcadis		1005	1008

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-36	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1005

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA- M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-49	SAMPLE ID:	~~MW-49~~ MW0049-027.5-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (Inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	20 feet to 35 feet	7.99	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
27.5	27.5	1040	1057	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1048	0.40	0.40	0.05	8.08	6.72	23.9	1570	0.50	1.6	Clear	None	
1051	0.15	0.55		8.08	6.73	24.1	1548	0.48	1.7			
1054	0.15	0.70		8.07	6.73	24.1	1507	0.42	1.4			
1057	0.15	0.85		8.07	6.74	24.2	1488	0.39	2.1			-20

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
PJW / Arcadis		1059	1102

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
27.5	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-49	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1059

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL.	
WELL NO: MW-25	SAMPLE ID: M505-MW0025-025.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 7.48	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1121	PURGING ENDED AT: 1138	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1129	0.40	0.40	0.05	7.66	6.60	24.0	2950	0.62	1.2	Clear	None	
1132	0.18	0.55		7.65	6.61	24.1	2950	0.76	2.6			
1135	0.15	0.70		7.65	6.62	24.1	2950	0.70	5.2			
1138	0.15	0.85		7.66	6.62	24.2	2940	0.70	4.0			-19

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1140	SAMPLING ENDED AT: 1143
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-25	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1140

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - M505	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	MW-26	SAMPLE ID:	M505-MW0026-035.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	1	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	feet to feet	STATIC DEPTH TO WATER (feet):	7.49	PURGE PUMP TYPE OR BAILER:	BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 60 feet) + 0.18 gallons = 0.18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	35	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	35	PURGING INITIATED AT:	1154	PURGING ENDED AT:	1211	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or (% saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1202	0.40	0.40	0.05	8.85	6.74	24.3	3230	0.38	0.6	Clear	none	
1205	0.15	0.55	"	8.85	6.73	24.3	3210	0.37	0.6	"	"	"
1208	0.15	0.70	"	8.84	6.74	24.2	3200	0.33	0.4	"	"	"
1211	0.15	0.85	"	8.84	6.74	24.2	3190	0.34	0.4	"	"	-13

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DDW / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1213	SAMPLING ENDED AT:	1216
PUMP OR TUBING DEPTH IN WELL (feet):	35	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N (replaced))		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-26	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled (1213)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA- MSDS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-33	SAMPLE ID:	MSDS-MW0033-025.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	22.5 feet to 27.5 feet	7.67	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1310	1327	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1318	0.40	0.40	0.05	7.85	6.69	24.1	1697	0.42	4.1	Clear	None	
1321	0.15	0.55	|	7.85	6.69	24.1	1697	0.42	3.9	|	|	|
1324	0.15	0.70	|	7.85	6.70	24.2	1698	0.49	5.7	|	|	|
1327	0.15	0.85	|	7.84	6.70	24.2	1700	0.50	5.0	|	|	407

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DSW / Arcadis		1329	1332

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-33	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled 1329

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-MSOS	SITE LOCATION:	Cape Canaveral, FL	
WELL NO:	MW-32	SAMPLE ID:	MSOS-MW0032-035.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	32.5 feet to 37.5 feet	7.77	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	1340	1357	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1348	0.40	0.40	0.05	8.43	6.84	23.8	1818	0.66	1.2	Clear	none	
1351	0.15	0.55		8.42	6.84	23.9	1818	0.51	2.7			
1354	0.15	0.70		8.42	6.83	23.9	1817	0.44	6.4			
1357	0.15	0.85		8.44	6.84	23.8	1820	0.44	1.7			+115

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW/ArcaDis		1359	1402

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-32	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ (1359)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-M505	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	MW-51	SAMPLE ID:	M505-MW0051-025.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	1	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	6.68	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	1429	PURGING ENDED AT:	1446	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1437	0.4	0.40	0.05	7.38	7.01	22.7	1904	0.55	7.7	clear	none	
1440	0.15	0.55		7.35	6.97	22.7	1916	0.58	7.4			
1443	0.15	0.70		7.33	6.92	22.7	1915	0.62	3.6			
1446	0.15	0.85		7.33	6.91	22.7	1916	0.62	2.8			-88

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1445	SAMPLING ENDED AT:	1451
PUMP OR TUBING DEPTH IN WELL (feet):	25	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION:	PUMP Y (N)	TUBING Y N (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-51	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled (1448)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA		
WELL NO: MW0055	SAMPLE ID: M505-MW0055-025-0-20150224	DATE: 2/24/15	

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.81	PURGE PUMP TYPE OR BAILER: SP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1428	PURGING ENDED AT: 1454	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1448	1.0	1.0	0.05	6.91	7.03	21.48	3211	0.49	4.19	clear	none	-44
1451	0.15	1.15	0.05	6.91	7.02	21.49	3212	0.46	5.12	"	"	-46
1454	0.15	1.30	0.05	6.92	7.02	21.48	3214	0.43	5.02	"	"	-48

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankal / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT: 1458
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0055	3	CG	40ml	HCl	–	–	8260B VOCs	RFPP	~200

REMARKS:

Sampled @ 1455

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA		
WELL NO: MW-0013IS	SAMPLE ID: M505-MW0013IS-025.5-20150224	DATE: 2/24/15	

PURGING DATA

WELL DIAMETER (Inches): 2"	TUBING DIAMETER (Inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 25 feet	STATIC DEPTH TO WATER (feet): 6.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 0913	PURGING ENDED AT: 0939	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0933	1.0	1.0	0.05	6.32	7.09	24.47	3029	4.79	15.16	clear	none	+174
0936	0.15	1.15	0.05	6.32	7.09	24.49	3035	4.78	13.12	↓	↓	+170
0939	0.15	1.30	0.05	6.32	7.08	24.51	3039	4.75	12.10			+166

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0940	SAMPLING ENDED AT: 0943
PUMP OR TUBING DEPTH IN WELL (feet): 25.5	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13IS	3	CG	40ml	HCl	–	–	82608 VOCs	RFPP	~200

REMARKS: Sampled @ 0940

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	MS05	SITE LOCATION:	KSC - NASA	
WELL NO:	MW-0039	SAMPLE ID:	MS05-MW0039-032.5-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	30 feet to 35 feet	5.13	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
32.5	33	0952	1018	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1012	1.0	1.0	0.05	5.33	6.40	23.83	2306	1.41	5.82	clear	none	+219
1015	0.15	1.15	0.05	5.34	6.42	23.85	2305	1.37	5.64	"	"	+225
1018	0.15	1.30	0.05	5.34	6.41	23.88	2304	1.34	5.42	"	"	+221

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankert / Aradas		1019	1021

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
32.5	LDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0039	3	CG	40ml	HCl	—	—	8260B-VOCs	RFPP	~200

REMARKS: Sampled @ 1019

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0040	SAMPLE ID: M505-MW0040-025.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (Inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 50 feet) + .1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1045	1.0	1.0	0.05	5.60	6.79	24.49	1066	1.52	10.13	clear	none	+104
1048	0.15	1.15	0.05	5.60	6.80	24.51	1080	1.50	8.62	"	"	+102
1051	0.15	1.30	0.05	5.66	6.81	24.52	1079	1.48	8.46	"	"	+101

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1052	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0040	3	CG	40 ml	HCl	–	–	8260B VOC's	RFPP	~200

REMARKS: Sampled @ 1052

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	LSE - NASA
WELL NO:	MW0044	SAMPLE ID:	M505 - MW0044 - 0225 - 20150224
		DATE:	2/24/15

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	5.03	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	27.5	PURGING INITIATED AT:	1108	PURGING ENDED AT:	1134	TOTAL VOLUME PURGED (gallons):	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1128	1.0	1.0	0.05	5.10	6.68	25.20	3415	0.65	16.18	clear	none	+130
1131	0.15	1.15	0.05	5.10	6.67	25.22	3415	0.63	14.24	"	"	+131
1134	0.15	1.30	0.05	5.11	6.68	25.24	3416	0.62	12.10	"	"	+131

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankal / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1135	SAMPLING ENDED AT:	1138
PUMP OR TUBING DEPTH IN WELL (feet):	27.5	TUBING MATERIAL CODE:	LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0044	3	CG	40 mL	HCL	–	–	8260B - VOCs	RFPP	~200

REMARKS: Sampled @ 1135

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0042	SAMPLE ID: M505-MW0042-035.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 5.78	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	PURGING INITIATED AT: 1153	PURGING ENDED AT: 1219	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1213	1.0	1.0	0.05	5.95	6.68	26.28	3237	0.50	9.93	clear	none	-21
1216	0.15	1.15	0.05	5.95	6.67	26.29	3239	0.48	7.86	"	"	-23
1219	0.15	1.30	0.05	5.96	6.68	26.31	3241	0.46	8.46	"	"	-25

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1220	SAMPLING ENDED AT: 1223
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0042	3	CG	40 ml	HCl	–	–	8260B	RFPP	~200

REMARKS: Sampled @ 1220

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0041	SAMPLE ID: M505-MW0041-025-0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.70	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1256	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1250	1.0	1.0	0.05	5.80	6.49	25.92	2905	0.36	18.14	clear	none	-50
1253	0.15	1.15	0.05	5.81	6.50	25.94	2942	0.35	17.62	"	"	-49
1256	0.15	1.30	0.05	5.80	6.49	25.97	2943	0.33	16.54	"	"	-48

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Damkot / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1257	SAMPLING ENDED AT: 1300
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0041	3	CG	40mls	HCl	—	—	8260B	RFPP	~200

REMARKS: Sample @ 1257

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC - NASA
WELL NO:	MW0023	SAMPLE ID:	M505 - MW0023-025.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	5.54	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35' feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	PURGING INITIATED AT:	1306	PURGING ENDED AT:	1332	TOTAL VOLUME PURGED (gallons):	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1326	1.0	1.0	0.05	5.67	6.71	24.33	2455	0.55	8.82	clear	none	+61
1329	0.15	1.15	0.05	5.63	6.72	24.34	2457	0.53	6.76	"	"	+60
1332	0.15	1.30	0.05	5.68	6.71	24.33	2458	0.51	7.14	"	"	+59

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1333	SAMPLING ENDED AT:	1338
PUMP OR TUBING DEPTH IN WELL (feet):	25'	TUBING MATERIAL CODE:	LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0023	3	CG	40ml	HCl	-	-	8260 B VOCs	RFPP	~200

REMARKS: Sampled @ 1333

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC-NASA	
WELL NO:	MW0024	SAMPLE ID:	M505-MW0024-035-0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	32.5 feet to 37.5 feet	5.53	P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
	35	1337	1408	1.36

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1357	1.0	1.0	0.05	5.59	6.59	23.66	2905	1.26	9.62	clear	none	+397
1400	0.15	1.15	0.05	5.59	6.61	23.65	2910	1.23	8.64	"	"	+399
1403	0.15	1.30	0.05	5.60	6.62	23.66	2913	1.20	8.82	"	"	+401

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankert / Arcadis		1404	1407

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
	LDPE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0024	3	CG	40ml	HCl	—	—	8260B VOC's	RFPP	~200

REMARKS: Sample Collected (1404)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: February 12, 2009

2/23/15 NASA-M505

30,611 - 30,976

TLO1402.0003/4

- 0800, gathered equipment & supplies.
- 0820 left for site, Picked up badge.
- On site at 1050, met w/ David B.
- Hts meeting. Collect round of water levels.
- Checked System. Turned selenoids off.
- Off base at 1600

TBH- 7.5

2/24/15 NASA M505 1 of 2

- 0800 on base
- Set up equipment, calibrated meters.
- Hts meeting.
- Set up on MW-35, Purging began at 0911, Sampled at 0930. Well purged good.
- MW-36, Purging began at 0946, Sampled at 1005 Well purged good.
- MW-49, Purging began at 1040, Sampled at 1059. Well purged good.
- MW-25, Purging began at 1121, Sampled at 1140, Well purge good.

→

2/24/15 NASA M505

→ MW-26, Purging began at 1154, Sampled at 1213, Well purged good.
- Poured Purge water to drum.
- MW-33, Purging began at 1310, Sampled at 1329, Well purged good.
- MW-32, Purging began at 1340, Sampled at 1359, Well purged good.
- MW-51, Purging began at 1429, Sampled at 1448, Well purged good.
- MW-52, Purging began at 1504, Sampled at 1526 Well purged good. Note: 2 of the 3 vials have ~4mm bubbles. Could not get rid of bubbles, Glass would not allow it.
- Moved back to Compound. Poured water to drum secured drum pallet.
- Checked System. Relay overload for Comp. was tripped. Reset & restarted system at 1600. System seemed good.
- Checked Amps. Motor is rated for 23.4 amps at 460v. Highest leg was 19.6A.
- Noticed the overload was set for ~10A. Turned overload up to ~22A.
- Post Cal. Meters. Watched system. System running good. Loaded up, off base at 1700.

TBH-(9)

2/25/15 NASA - M505

- 0800 on base. Met w/ David D.
- HTS meeting. Inspect-d system. System running good on Zone-2.
- Set up equipment, calibrated D.O. meter.
- Collected system readings and well head readings for Zone-2.
- 0945 switched to Zone-3.
- 1015 Collected system readings & well head readings for Zone-3.
- 1050 switched to Zone-4.
- 1120 collected system readings at well head readings.
- 1230 turned system back to Auto.
- Post Cal'd D.O. meter.
- Cleaned up, loaded truck. off site at 1255.
- Back & unload at 1530.

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI-55 **INSTRUMENT #** 13A102423

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 100% Ambient Air

Standard B _____

Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/02/25	0952	A	100%	99.7	0.3	Y	Init	DJW
" "	1236	A	100%	98.4	1.6	N	Cont	DJW

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) LaMotte 2020 **INSTRUMENT #** 3042-1102

PARAMETER: [check only one]

☐ TEMPERATURE ☑ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0 NTUs

Standard B 10 NTUs

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	02/24/15	0813	A	0	0.0	0	Y	INT	DJW
M-505	↓	0815	B	10	10.0	0	Y	INT	DJW
↓	↓	0814	A	0	0.0	0	N	ICV	DJW
		0816	B	10	10.3	3.0	N	ICV	DJW
		1611	A	0	0.0	0	N	CCV	DJW
		1612	B	10	10.8	8.0	N	CCV	DJW

INSTRUMENT (MAKER/MODEL#) Oakton Con 6 Acorn **INSTRUMENT #** 1425499

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☑ CONDUCTIVITY ☐ RESIDUAL Cl ☐ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 500 µs

Standard B 1000 µs

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	02/24/15	0818	A	500 µs	500	0	Y	INT	DJW
M-505	↓	0822	B	1000 µs	1000	0	Y	INT	DJW
↓	↓	0820	A	500 µs	500	0	N	ICV	DJW
		0824	B	1000 µs	1002	0.2	N	ICV	DJW
		1614	A	500 µs	519	3.8	N	CCV	DJW
		1616	B	1000 µs	1013	1.3	N	CCV	DJW

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKER/MODEL#) Oakton pH 6 Acorn **INSTRUMENT #** 1398936

PARAMETER: [check only one]

☐ TEMPERATURE ☐ TURBIDITY ☐ CONDUCTIVITY ☐ RESIDUAL Cl ☑ pH ☐ DO ☐ ORP ☐ SALINITY ☐ OTHER

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 7.00 Standard pH units @

Standard B 4.00 Standard pH units @

Standard C

Project Name and Number	DATE (mm/dd/yy)	TIME (hr:min) Temp (°C)	STD (A,B,C)	STD Value (Theoretical)	INSTRUMENT RESPONSE (Actual)	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	Sampler Initials
NASA	02/24/15	0825 20.9	A	7	7.00	0	Y	INT	DJW
M-505	↓	0829 21.3	B	4	4.00	0	Y	INT	DJW
↓	↓	0827 20.4	A	7	7.02	0.3	N	ICV	DJW
		0831 21.4	B	4	4.01	0.3	N	ICV	DJW
		1617 23.0	A	7	7.17	2.4	N	CCV	DJW
		1619 23.2	B	4	4.11	2.8	N	CCV	DJW

ARCADIS

Document Control Number: TGM - _____

TGM + *project number plus date as follows: xxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA M505		**Project Location:** KSC	
Date: 2/23/18	**Time:** 1100	**Conducted by:** DAVID D/DAVID J.	**Signature/Title:** Techs
Client: NASA	**Client Contact:** HARRY PLAZA	**Subcontractor companies:** N/A	

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Take water levels 3 _____ 5 _____

2 Sample wells 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes:**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: ~~Discuss Overhead Utilities~~ N/A

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess the Risks** (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, slips) (L M H) Slips trips falls	☒ Motion (i.e., traffic, moving water) (L M H) CARS	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H) Open wells slowly	☒ Environment (i.e., heat, cold, ice) (L M H) Stay hydrated
☒ Chemical (i.e., fuel, acid, paint) (L M H) VOC's, TCE, PCE	☒ Biological (i.e., ticks, poison ivy) (L M H) High grass areas	☒ Radiation (i.e., alpha, sun, laser) (L M H) Use sunblock
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	I have read and understand the HASP
Dawja Dawkins/Arcadis	1100		DD
David Dale/ARCADIS	1100		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3758.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9558 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end-of day or before next day's work (Check those applicable and explain:)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work Interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

ARCADIS

Document Control Number: TGM - _____

TGM + *project number plus date as follows: xxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: MSOS		**Project Location:** ITS Wayne KSC	
Date: 2/25/14	**Time:** 0830	**Conducted by:** DAVID/DON	**Signature/Title:** Techs
Client: NASA		**Client Contact:** HARRY ILOZO	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1. O2 mon
2. well readings
3.
4.
5.
6.

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here:

If yes, describe them here:

How will they be controlled?

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes:**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ All equipment checked & OK?
		☑ Staff knows gathering points?

Comments: Discuss Overhead Utilities!

Recognize the hazards (check all those that are discussed) (Examples are provided) and Assess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, trips) (L (M) H) Slips, trips, falls	☑ Motion (i.e., traffic, moving water) (L (M) H)	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☑ Pressure (i.e., gas cylinders, wells) (L (M) H)	☑ Environment (i.e., heat, cold, ice) (L (M) H)
☑ Chemical (i.e., fuel, acid, paint) (L (M) H) TCE, VOCs	☑ Biological (i.e., ticks, poison ivy) (L (M) H) MOS MOSTOS, Ticks	☒ Radiation (i.e., alpha, sun, laser) (L (M) H)
☑ Sound (i.e., machinery, generators) (L M (H)) System NOISE	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☑ General PPE Usage	☑ Hearing Conservation	☐ Respiratory Protection
☑ Personal Hygiene	☐ Exposure Guidelines	☑ Decon Procedures
☑ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☑ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	I have read and understand the HASP
David Dankel / Arcadis	0830		
David Weld / Arcadis	0830		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3758.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.6556 and Corp H&S at 1.720.344.3600

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain:)

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S Issues:

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

ARCADIS

Document Control Number:TGM - _____
TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA MSAR		Project Location: KSC	
Date: 2/24/15	Time: 0830	Conducted by: DAVID/DAVID W	Signature/Title:
Client: NASA	Client Contact: HARRY RAZA	Subcontractor companies: —	

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1. Sample wells
2. Turn system off
3. Ship samples
4.
5.
6.

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes:**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: Discuss Overhead Utilities ; N/A

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess the risks** (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, trips) (L M H) — slips trips falls	☒ Motion (i.e., traffic, moving water) (L M H) — vest, cones	☐ Mechanical (i.e., augers, motors) (L M H)
☐ Electrical (i.e., utilities, lightning) (L M H)	☐ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H) — TCE, PCE	☒ Biological (i.e., ticks, poison ivy) (L M H) — ticks mosquitos	☒ Radiation (i.e., alpha, sun, laser) (L M H)
☐ Sound (i.e., machinery, generators) (L M H)	☒ Personal (i.e., alone, night, not fit) (L M H) — use phones	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☐ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
☐	☐	☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	I have read and understand the HASP
David Daylor / Arcadis / [signature]	0830		
[signature] / Arcadis / [signature]	0830		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end-of day or before next day's work (Check those applicable and explain.)

- ☐ Lessons learned and best practices learned today:
- ☐ Incidents that occurred today:
- ☐ Any Stop Work Interventions today?
- ☐ Corrective/Preventive Actions needed for future work:
- ☐ Any other H&S issues:

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** _____

PARAMETER: *[check only one]*

☐ TEMPERATURE ☒ CONDUCTIVITY ☐ SALINITY ☒ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☒ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 Standard D 100% Amb Air
Standard B 7.00 MSDS 2/24/15
Standard C 1000 us/cm -DJD

DATE (mm/dd/yy)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/02/24	0902	A	4.01	4.01	-	no	INIT	DJD
15/02/24	0904	B	7.00	7.01	-	no	INIT	DJD
15/02/24	0906	C	1000	1001	-	no	INIT	DJD
15/02/24	0910	D	100%	100.3	-	no	INIT	DJD
15/02/24	1534	A	4.01	4.03	-	no	FINAL	DJD
15/02/24	1536	B	7.00	7.03	-	no	FINAL	DJD
15/02/24	1536	C	1000	1003	-	no	FINAL	DJD
15/02/24	1542	D	100%	99.1	-	no	FINAL	DJD
		A	4.01				INIT	
		B	7.00				INIT	
		C	1000				INIT	
		D	100%				INIT	
		A	4.01				FINAL	
		B	7.00				FINAL	
		C	1000				FINAL	
		D	100%				FINAL	
		A	4.01				INIT	
		B	7.00				INIT	
		C	1000				INIT	
		D	100%				INIT	
		A	4.01				FINAL	
		B	7.00				FINAL	
		C	1000				FINAL	
		D	100%				FINAL	

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) LAMOTTE 2020 **INSTRUMENT #** _____

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☒ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0
Standard B 10.0
Standard C _____

M505 2/24/15 -DJD

15/02/24	0911	A	0.0	0.0	-	NO	INIT	DJD
15/02/24	0912	B	10.0	10.3	-	NO	INIT	DJD
15/02/24	1543	A	0.0	0.0	-	NO	FINAL	DJD
15/02/24	1544	B	10.0	10.16	-	NO	FINAL	DJD
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	

US Environmental Rental Corporation

(888) 550-8100 www.usenvironmental.com

166 Riverview Ave, Waltham, MA 02453 (781) 899-1560
91 Prestige Park Circle, Suite 5, East Hartford, CT 06108 (860) 289-8700
5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Order No.: RR95814
Date: 2/20/2015
Technician: SJ

Company: Arcadis
Contact: Dave Dankerl
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
556	0	✓	
Handheld Display	08J100028	✓	

Item	Tech	QC	Item	Tech	QC
Cable 4M	✓		AC Adaptor		
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit	✓	
Storage / Cal Cup	✓		Calibration Kit	✓	
Sensor Guard	✓				
Manual					
Sonde Cap	✓				
Software					
Extra Batteries	✓				
Display Comm. Cable					
Sonde Comm. Cable					

Calibration Report

556			0	
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)	985	1000	140721
pH 7 Buffer	(+/- .2)	7.05	7.00	1400820B
pH mV for 7 Buffer	(0 +/- 50)		**-2.9**	
pH 4 Buffer	(+/- .2)	3.92	4.00	1400820A
pH mV for 4 Buffer	(180 +/- 50)		**176.4**	
pH 10 Buffer	(+/- .2)	9.84	9.97	#REF!
pH mV for 10 Buffer	(-180 +/- 50)		**-170.4**	
ORP mV, 237.5	(+/- 20 mV)	186.0	200.00	140820C
DO 100% Sat	(+/- 2%)	112.1%	103.0%	
0% DO Check	(+/- 2%)		0.17	PS1
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

U.S. Environmental
Rental Corporation
166 Riverview Ave Waltham, MA. 781-899-1560
91 Prestige Park Circle Unit 5 East Hartford, CT. 860-289-8700
127 RT. 206 South Suite 12 Hamilton, NJ. 609-585-6090
1202 Tech Blvd. Suite 108 Tampa, FL 813-628-4200
www.usenvironmentalrental.com

LaMotte 2020we

Date: 2/20/15

RR#	95814	***Company***	Arcadis
Tech	SJ	***Contact***	Dave Dankerl
2020E S/N#	3093-1213	***Phone #***	813-903-3100

Calibration:

Before Reading	***0NTU***	0.00	***10NTU***	10.02
After Reading	***0NTU***	0.00	***10NTU***	9.99

Packing List

2020 Meter	XXX	Kim Wipes	XXX
AC Power Cord	XXX		
O NTU Cal. Vial	XXX		
10 NTU Cal. Vial	XXX		
9V Battery			
Spare 9V Battery	XXX		
Quick Card	XXX		
Manual	XXX		
(2) Sample Vials	XXX		

Please be sure to verify receipt of all accessories. Missing accessories will be billed at list price plus shipping
If unit has any problems customer must notify U.S. Environmental with in 24 Hours of receipt of unit.
Please call our technical support department at 888-550-8100 ** many problems can be solved in the field

Additional Comments:

ARCADIS
Infrastructure, environment, buildings

Site Name: M505
Project Number: TL014020.0000

MULTIPLE WELL WATER LEVEL MEASUREMENTS

5/18/15

Well No.	Well Depth	Date	Time	DTW	DTP	PROD	RMVD	Remarks -
MW-54		5/18/15		8.55				
MW-55				8.13				
MW-52				8.22				
MW-53				7.02				
MW-34				8.71				
MW-51				8.03				
MW-33				9.13				
MW-32				9.38				
MW-49				9.44				
MW-35				5.21				
MW-36				9.70				
MW-26				9.04				
MW-25				9.02				
MW-50				9.20				
MW-30				8.50				
MW-14S				7.39				
MW-56				4.45				
MW-57				5.21				
MW-28				3.97				
MW-59				5.14				
MW-58				3.73				
MW-21				9.27				
MW-11S				6.36				
MW-27				7.87				
MW-22				7.68				
MW-47				7.57				
MW-9DS				7.49				
MW-9S				7.55				
MW-45		5/18/15		7.21				

Notes

ARCADIS
Infrastructure, environment, buildings

Site Name: M505
Project Number: TC014020-0000

2 of 2

MULTIPLE WELL WATER LEVEL MEASUREMENTS

5/18/15

Well No.	Well Depth	Date	Time	DTW	DTP	PROD	RMVD	Remarks -
MW-46		5/18/15		7.25				
MW-38				7.17				
MW-5I				7.45				
MW-58				7.42				
MW-19				7.56				Well cap replaced
MW-20				7.30				
MW-48				7.34				
MW-18				7.49				
MW-17				7.58				
MW-23				7.09				
MW-24				7.00				
IW3I		5/18/15		7.91				
IW3S				7.16				
MW-37				6.90				
MW-42				7.34				
MW-41				7.32				
IW-15				7.34				
MW-16				7.11				
IW10I				7.45				
IW7I				7.38				
IW-7S				6.21				
IW-12IS				7.13				
IW-1S				7.70				
IW-9I				7.66				
IW-9S				7.58				
MW-13IS				7.80				
MW-39				~~6.57~~				
MW-40				7.07				
MW-44		5/18/15		6.51				

Notes

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0045	SAMPLE ID: M505-MW0045-034.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32 feet to 37 feet	STATIC DEPTH TO WATER (feet): 7.16	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1006	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1000	1.0	1.0	0.05	7.37	6.71	26.5	3440	0.35	2.04	clear	none	-89.7
1003	0.15	1.15	0.05	7.37	6.71	26.5	3442	0.33	1.96	"	"	-89.2
1006	0.15	1.30	0.05	7.37	6.71	26.5	3445	0.31	1.87	"	"	-88.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1007	SAMPLING ENDED AT: 1010
PUMP OR TUBING DEPTH IN WELL (feet): 34.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW45	3	CG	40ml	HCl	–	–	~~APP~~ VOCs	APP	~200

REMARKS: sampled @ 1007

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-7I	SAMPLE ID: M505-MW0007-0304-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.29	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 030.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 30'	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1045	1.0	1.0	0.05	7.31	6.67	27.1	2300	0.20	8.45	clear	none	-46.2
1048	0.15	1.15	0.05	7.31	6.67	27.1	2302	0.18	8.12	"	"	-46.0
1051	0.15	1.30	0.05	7.31	6.67	27.1	2304	0.17	8.06	"	"	-45.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David VanKerl - AVC	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1052	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 30'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-7	3	CG	40 ml	HCl	-	-	8260	APP	~200

REMARKS: 1052

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0010IS	SAMPLE ID: MW0010IS-025-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 7.36	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1108	PURGING ENDED AT: 1134	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1128	1.0	1.0	0.05	7.43	6.85	27.4	2506	3.30	6.12	clear	none	+118.0
1131	0.15	1.15	0.05	7.43	6.85	27.4	2508	3.32	5.86	"	"	+118.6
1134	0.15	1.30	0.05	7.43	6.85	27.4	2510	3.31	4.96	"	"	+119.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankal/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1138
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0010IS	3	CA	40ml	HCl	–	–	8260	APP	~200

REMARKS:
High turbidity but stable @ ~2.30 mg/L
1135

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0045	SAMPLE ID: M505-MW0045-009.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.33	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (14 feet – 6.33 feet) X .16 gallons/foot = 1.22 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	PURGING INITIATED AT: 1155	PURGING ENDED AT: 1223	TOTAL VOLUME PURGED (gallons): 0.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1217	1.2	1.2	0.05	6.40	6.58	27.5	518	0.79	4.06	clear	none	*46.6
1220	0.15	1.35	0.05	6.40	6.58	27.5	517	0.83	4.12	"	"	*46.7
1223	0.15	1.50	0.05	6.40	6.58	27.5	516	0.81	4.08	"	"	

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / AVS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1224	SAMPLING ENDED AT: 1227
PUMP OR TUBING DEPTH IN WELL (feet): 9'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW45	3	CG	40ml	HCL	–	–	8260	APP	~200

REMARKS: 1224

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0003I	SAMPLE ID: M505-0003I-0[illegible]0,6-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.83	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1234	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1254	1.0	1.0	0.05	7.85	6.98	26.6	746	0.26	8.16	clear	none	-49.5
1257	0.15	1.15	0.05	7.85	6.97	26.6	748	0.24	9.12	"	"	-50.1
1300	0.15	1.30	0.05	7.85	6.97	26.6	750	0.21	8.44	"	"	-50.9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1301	SAMPLING ENDED AT: 1304
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-3I	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1301

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0041	SAMPLE ID: M505-MW0041-075.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.23	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 30 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1317	PURGING ENDED AT: 1343	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1337	1.0	1.0	0.05	7.32	6.54	27.0	2259	0.23	2.16	clear	none	-31.5
1340	0.15	1.15	0.05	7.32	6.54	27.0	2261	0.22	3.04	"	"	-31.8
1343	0.15	1.30	0.05	7.32	6.55	27.0	2263	0.20	2.42	"	"	-32.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Hankerd / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1344	SAMPLING ENDED AT: 1347
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW41	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1344

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0042	SAMPLE ID: M505-MW0042-035.0-20151519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 7.26	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	PURGING INITIATED AT: 1352	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1412	1.0	1.0	0.05	7.35	6.64	26.7	3137	0.21	4.16	clear	none	-34.7
1415	0.5	1.5	0.05	7.35	6.64	26.7	3139	0.19	4.02	"	"	-35.1
1418	0.5	1.30	0.05	7.35	6.65	26.7	3141	0.17	3.97	"	"	-35.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel/ANS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1419	SAMPLING ENDED AT: 1422
PUMP OR TUBING DEPTH IN WELL (feet): 35'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS: 1419

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW004B	SAMPLE ID: M505-MW004B-027.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.23	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet – 7.23 feet) X .04 gallons/foot = 1.11 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1448	PURGING ENDED AT: 1506	TOTAL VOLUME PURGED (gallons): 1.82

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1500	1.4	1.4	0.07	7.28	6.61	27.5	3271	0.33	19.6	clear	none	-77.5
1503	0.21	1.61	0.07	7.28	6.62	27.5	3273	0.31	18.7	"	"	-76.8
1506	0.21	1.82	0.07	7.28	6.60	27.6	3275	0.29	18.2	"	"	-76.1

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel - ADS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1507	SAMPLING ENDED AT: 1510
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW4B	3	CG	40ml	HCL	–	–	8260	APP	~200

REMARKS: 1507

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0018	SAMPLE ID: M505-MW0018-036.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 7.37	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 95 feet) + 1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	PURGING INITIATED AT: 1524	PURGING ENDED AT: 1550	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1544	1.0	1.0	0.05	7.43	6.64	26.6	3358	0.27	11.8	clear	none	+63.1
1547	0.15	1.15	0.05	7.43	6.64	26.6	3356	0.25	10.2	"	"	+64.9
1550	0.15	1.30	0.05	7.44	6.64	26.6	3354	0.24	9.62	"	"	+65.3

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1551	SAMPLING ENDED AT: 1554
PUMP OR TUBING DEPTH IN WELL (feet): 36'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW18	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1551

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0013FS	SAMPLE ID: M505-MW0013FS-025.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 7.83	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1600	PURGING ENDED AT: 1626	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1620	1.0	1.0	0.05	7.89	6.97	25.9	2829	4.11	1.80	clear	none	+125.4
1623	0.15	1.15	0.05	7.89	6.97	25.9	2831	4.10	2.16	"	"	+126.2
1626	0.15	1.30	0.05	7.88	6.98	25.9	2835	4.12	2.06	"	"	+127.3

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David DanRad / AVS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1627	SAMPLING ENDED AT: 1630
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13FS	3	CG	40ml	HCl	—	—	8260	APP	~200

REMARKS: DO high but stable @ ~4.10 mg/L 1627

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0016	SAMPLE ID: M505-MW0016-0360-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 7.05	PURGE PUMP TYPE OR BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (0.14 gallons/foot X 45 feet) + 1 gallons = 1.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	PURGING INITIATED AT: 1638	PURGING ENDED AT: 1704	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1658	1.0	1.0	0.05		6.77	28.0	3410	0.58	5.96	clear	none	+100.8
1701	0.15	1.15	0.05		6.77	28.0	3414	0.57	6.12	"	"	+100.2
1704	0.15	1.30	0.05		6.77	28.0	3417	0.55	5.87	"	"	+99.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1705	SAMPLING ENDED AT: 1708
PUMP OR TUBING DEPTH IN WELL (feet): 36'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-16	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1705

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0023	SAMPLE ID: M505-MW0023-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.04	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1715	PURGING ENDED AT: 1741	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1735	1.0	1.0	0.05	7.11	6.83	25.7	2727	0.20	2.16	clear	none	+1.2
1738	0.15	1.15	0.05	7.11	6.83	25.7	2729	0.18	2.42	"	"	+1.9
1741	0.15	1.30	0.05	7.11	6.84	25.7	2732	0.19	2.12	"	"	+2.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert - AVS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1742	SAMPLING ENDED AT: 1745
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW23	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1742

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0055	SAMPLE ID: M505-MW0055-25.0 (20150519)	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.04	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0930	PURGING ENDED AT: 0947	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0938	0.40	0.40	0.05	8.24	6.64	24.5	3804	0.31	1.18	clear	none	-139
0941	0.15	0.55		8.24	6.68	24.4	3809	0.28	0.97			-143
0944	0.15	0.70		8.24	6.73	24.3	3805	0.28	0.61			-151
0947	0.15	0.85		8.24	6.74	24.3	3806	0.33	0.45			-152

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0949	SAMPLING ENDED AT: 0953

PUMP OR TUBING DEPTH IN WELL (feet): 25.0	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW55	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS: Note: ~~AGP~~ lid would not close. Cut exactly 2.0 off of well. Survey height will be 2" lower.

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0052	SAMPLE ID: M505-MW0052-010.020150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 8.24	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.1 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1009	PURGING ENDED AT: 1026	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1017	0.40	0.40	0.05	8.33	6.17	24.3	414	0.37	7.4	Clear	none	-43
1020	0.15	0.55	|	8.33	6.11	24.2	390	0.36	7.9	|	|	-46
1023	0.15	0.70	|	8.33	6.05	24.2	388	0.33	8.4	|	|	-49
1026	0.15	0.85	|	8.34	6.00	24.3	374	0.27	7.7	|	|	-53

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1028	SAMPLING ENDED AT: 1032
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW52	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0053	SAMPLE ID: M505-MW0053-010.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 7.05	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 10 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1040	PURGING ENDED AT: 1057	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1048	0.40	0.40	0.05	7.10	7.09	24.6	2864	6.36	0.83	Clear	None	+39
1051	0.15	0.55	"	7.10	7.17	24.7	2870	6.29	0.77	"	"	+39
1054	0.15	0.70	"	7.10	7.18	24.7	2873	6.19	1.13	"	"	+39
1057	0.15	0.85	"	7.10	7.19	24.6	2873	6.25	0.49	"	"	+39

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1059	SAMPLING ENDED AT: 1103

PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-53	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0051	SAMPLE ID: M505-MW-0051-025.02015051 9	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.07	PURGE PUMP TYPE OR BAILER: BP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1118	PURGING ENDED AT: 1135	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1126	0.40	0.40	0.05	8.57	7.12	25.7	3121	0.15	1.12	clear	none	-198
1129	0.15	0.55	"	8.58	7.11	25.7	3127	0.15	0.79	clear	none	-197
1132	0.15	0.70	"	8.59	7.09	25.6	3134	0.16	2.24	"	"	-195
1135	0.15	0.85	"	8.61	7.07	25.6	3138	0.15	0.69	"	"	-191

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1137	SAMPLING ENDED AT: 1141
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0051	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0033	SAMPLE ID: M505-MW0033-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 9.09	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1154	PURGING ENDED AT: 1211	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1202	0.40	0.40	0.05	9.21	6.75	26.6	2659	0.79	8.85	Clear	none	-20
1205	0.15	0.55	|	9.21	6.74	26.8	2655	0.65	6.50	|	|	-25
1208	0.15	0.70	|	9.21	6.73	26.6	2659	0.58	4.88	|	|	-31
1211	0.15	0.85	|	9.21	6.72	26.7	2654	0.47	3.91	|	|	-39

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / ArcaDis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1213	SAMPLING ENDED AT: 1217
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-33	3	C6	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0032	SAMPLE ID: M505-MW0032-035.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 9.22	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1221	PURGING ENDED AT: 1238	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1229	0.40	0.40	0.05	9.84	6.83	27.0	2634	0.71	4.82	clear	none	-36
1232	0.15	0.55	|	9.87	6.82	22.1	2633	0.63	3.98	|	|	-42
1235	0.15	0.70	|	9.86	6.82	26.9	2634	0.55	1.17	|	|	-46
1238	0.15	0.85	|	9.86	6.82	26.9	2623	0.54	1.26	|	|	-48

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DUW/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1240	SAMPLING ENDED AT: 1244
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
mw-32	3	G6	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0035	SAMPLE ID: MW505-MW0035-025.0-201105	DATE: 5/9/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.21	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1259	PURGING ENDED AT: 1316	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1307	0.40	0.40	0.05	5.60	6.73	27.9	2933	0.31	2.71	Clear	none	-72
1310	0.15	0.55	|	5.60	6.72	28.0	2912	0.26	2.26	|	|	-75
1313	0.15	0.70	|	5.60	6.72	28.1	2911	0.24	2.11	|	|	-79
1316	0.15	0.85	|	5.59	6.72	28.2	2910	0.23	2.13	|	|	-81

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1318	SAMPLING ENDED AT: 1322
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-35	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0049	SAMPLE ID: M505-MW0049-027.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 9.45	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1427	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1418	0.40	0.40	0.05	9.53	6.75	26.6	2680	0.36	8.94	clear	none	-81
1421	0.15	0.55	|	9.54	6.73	26.5	2665	0.27	2.63	|	|	-89
1424	0.15	0.70	|	9.54	6.73	26.5	2662	0.27	1.17	|	|	-90
1427	0.15	0.85	|	9.54	6.71	26.6	2660	0.26	0.76	|	|	-91

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1429	SAMPLING ENDED AT: 1433
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-49	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0025	SAMPLE ID: M505-MW0025-025-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 9.03	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1446	PURGING ENDED AT: 1503	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1454	0.40	0.40	0.05	9.15	6.59	25.9	3481	0.42	2.38	clear	none	-82
1457	0.15	0.55	|	9.15	6.59	25.8	3473	0.40	1.41	|	|	-88
1500	0.15	0.70	|	9.15	6.58	25.7	3471	0.38	1.16	|	|	-91
1503	0.15	0.85	|	9.15	6.58	25.7	3468	0.38	0.77	|	|	-93

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1505	SAMPLING ENDED AT: 1509
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-25	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0059	SAMPLE ID: M505-MW-0059-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.17	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + 0.0014 gallons/foot X 35 feet) + 0.1 gallons = @ 1.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1524	PURGING ENDED AT: 1541	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1532	0.40	0.40	0.05	5.27	6.62	26.7	1166	0.29	1.46	Clear	None	-98
1535	0.15	0.55	|	5.27	6.61	26.6	1165	0.27	1.12	|	|	-101
1538	0.15	0.70	|	5.27	6.61	26.5	1166	0.21	0.71	|	|	-106
1541	0.15	0.85	|	5.27	6.61	26.5	1166	0.20	0.84	|	|	-109

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1543	SAMPLING ENDED AT: 1547
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-59	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0058	SAMPLE ID: M505-MW0058-010.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 3.68	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.1 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1558	PURGING ENDED AT: 1615	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1606	0.40	0.40	0.05	4.51	5.98	29.3	357	0.42	4.83	Clear	None	-121
1609	0.15	0.55		4.54	5.98	29.4	359	0.36	3.93			-128
1612	0.15	0.70		4.58	5.98	29.4	367	0.32	3.24			-136
1615	0.15	0.85		4.60	5.99	29.4	372	0.29	2.89			-140

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DLW / ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1617	SAMPLING ENDED AT: 1621
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW58	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0021	SAMPLE ID: M505-MW0021-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 4.24	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1638	PURGING ENDED AT: 1655	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1646	0.40	0.40	0.05	4.48	7.03	26.5	1099	0.23	2.25	Clear	None	-135
1649	0.15	0.55	|	4.48	7.05	26.4	1114	0.20	1.09	|	|	-140
1652	0.15	0.70	|	4.47	7.05	26.3	1109	0.19	0.24	|	|	-143
1655	0.15	0.85	|	4.47	7.06	26.3	1114	0.16	0.11	|	|	-148

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1657	SAMPLING ENDED AT: 1701
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-21	3	VOC	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0005I	SAMPLE ID: M505-MW0005-030.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.36	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + . (gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 30	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 30	PURGING INITIATED AT: 1255	PURGING ENDED AT: 1327	TOTAL VOLUME PURGED (gallons): 1.60

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1315	1.0	1.0	0.05	7.44	6.61	27.8	3595	0.23	23.3	clear	none	-16.6
1318	0.15	1.15	0.05	7.44	6.61	27.8	3595	0.21	20.8	w/Tiny		-16.9
1321	0.15	1.30	0.05	74.44	6.60	27.9	3597	0.19	19.8	particles		-17.3
1324	0.15	1.45	0.05	74.45	6.60	27.9	3599	0.18	19.5	" "		-17.6
1327	0.15	1.60	0.05	74.45	6.60	27.9	3596	0.21	19.1	" "		-18.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1328	SAMPLING ENDED AT: 1331
PUMP OR TUBING DEPTH IN WELL (feet): 30'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0005	3	CG	40ml	HCL	-	-	8260	APP	~200

REMARKS: 1328

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-39	SAMPLE ID: M505-MW0039-032.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 6.72	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	PURGING INITIATED AT: 0920	PURGING ENDED AT: 0946	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0940	1.0	1.0	0.05	7.05	6.60	25.9	3298	0.28	3.14	clear	none	+104.4
0943	0.15	1.15	0.05	7.05	6.60	25.9	3301	0.26	2.86	〃	〃	+104.1
0946	0.15	1.30	0.05	7.05	6.60	25.9	3304	0.24	2.76	〃	〃	+103.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dambert/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0947	SAMPLING ENDED AT: 0950
PUMP OR TUBING DEPTH IN WELL (feet): 32.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-39	3	CG	40ml	HCL	—	—	8260	APP	~200

REMARKS: 0947

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)
SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0040	SAMPLE ID: M505-MW0040-022.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 25 feet	STATIC DEPTH TO WATER (feet): 7.05	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 30 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 22.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 22.5	PURGING INITIATED AT: 0955	PURGING ENDED AT: 1021	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/l) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1015	1.0	1.0	0.05	7.20	6.79	26.1	1438	0.25	4.26	clear	none	+54.6
1018	0.15	1.15	0.05	7.20	6.79	26.2	1441	0.23	3.87	″	″	+53.6
1021	0.15	1.30	0.05	7.20	6.78	26.2	1447	0.21	3.64	″	″	+52.4

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1022	SAMPLING ENDED AT: 1025
PUMP OR TUBING DEPTH IN WELL (feet): 22.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0040	3	CG	40mL	HCl	–	–	8260	APP	~200

REMARKS: 1022

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-44	SAMPLE ID: M505-MW0044-027.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 6.50	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet – 6.50 feet) X .04 gallons/foot = 1.14 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1035	PURGING ENDED AT: 1105	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1059	1.2	1.2	0.05	6.65	6.60	26.5	3503	0.14	7.15	clear	none	175.1
1102	0.15	1.35	0.05	6.65	6.60	26.5	3507	0.12	5.17	↓	↓	176.1
1105	0.15	1.50	0.05	6.65	6.60	26.6	3511	0.11	6.82	↓	↓	176.8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1106	SAMPLING ENDED AT: 1109
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-44	3	CG	40mL	HCl	–	–	8260	APP	~200

REMARKS: 1106

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, [illegible]

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0020	SAMPLE ID: M505-MW0020-036.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 7.33	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = 1.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36	PURGING INITIATED AT: 1126	PURGING ENDED AT: 1152	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) ~~mg/L~~ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1146	1.0	1.0	0.05	7.71	6.71	27.9	3890	0.19	10.0	clear	none	+94.8
1149	0.15	1.15	0.05	7.71	6.71	27.9	3890	0.17	9.84	"	"	+94.9
1152	0.15	1.30	0.05	7.71	6.71	28.0	3892	0.16	9.14	"	"	+95.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David DanKert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1153	SAMPLING ENDED AT: 1156
PUMP OR TUBING DEPTH IN WELL (feet): 36	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW20	3	CA	40 ml	HCL	—	—	8260	APP	~200

REMARKS: 1153

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0019	SAMPLE ID: M505-MW0019-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.51	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1236	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1230	1.0	1.0	0.05	7.63	6.78	28.5	3506	0.40	6.14	clear	none	-11.3
1233	0.15	1.15	0.05	7.63	6.77	28.5	3505	0.38	5.82	↓	↓	-11.1
1236	0.15	1.30	0.05	7.63	6.77	28.6	3504	0.39	5.24	↓	↓	-10.9

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1237	SAMPLING ENDED AT: 1240

PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW19	3	CG	40ml	HCl		–	8260	APP	~200

REMARKS: 1237

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0056	SAMPLE ID: M505-MW0056-010.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 4.53	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 25 feet) + 0.1 gallons = 0.12 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 0925	PURGING ENDED AT: 0942	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0933	0.40	0.40	0.05	5.62	6.35	25.6	540	0.58	2.40	clear	none	-185
0936	0.15	0.55	|	5.62	6.36	25.5	538	0.44	2.44	|	|	-188
0939	0.15	0.70	|	5.62	6.36	25.4	536	0.40	2.31	|	|	-192
0942	0.15	0.85	|	5.62	6.37	25.4	534	0.29	2.17	|	|	-196

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0944	SAMPLING ENDED AT: 0948
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW56	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0057	SAMPLE ID: M505-MW0057-0.25.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0957	PURGING ENDED AT: 1014	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1005	0.40	0.40	0.05	5.40	6.71	26.1	1244	0.30	0.96	Clear	none	-122
1008	0.15	0.55	"	5.40	6.71	26.1	1246	0.30	1.16	"	"	-123
1011	0.15	0.70	"	5.40	6.71	26.1	1248	0.28	2.59	"	"	-124
1014	0.15	0.85	"	5.40	6.71	26.1	1249	0.26	2.19	"	"	-125

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / ArcADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1016	SAMPLING ENDED AT: 1020
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-57	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0028	SAMPLE ID: M505-MW0028-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 4.00	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1034	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1042	0.40	0.40	0.05	4.24	6.89	25.7	1152	0.23	1.67	Clear	none	-124
1045	0.15	0.55	|	4.28	6.89	25.5	1151	0.19	1.36	|	|	-129
1048	0.15	0.70	|	4.27	6.89	25.4	1166	0.14	1.22	|	|	-134
1051	0.15	0.85	|	4.27	6.89	25.5	1166	0.17	1.04	|	|	-131

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1053	SAMPLING ENDED AT: 1057
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-28	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0027	SAMPLE ID: M505-MW0027-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.91	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1126	PURGING ENDED AT: 1143	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1134	0.40	0.40	0.05	7.96	6.77	28.1	1173	0.41	1.47	Clear	none	-139
1137	0.15	0.55	"	7.98	6.77	28.0	1176	0.39	1.31	"	"	-139
1140	0.15	0.70	"	7.99	6.76	27.9	1179	0.35	3.04	"	"	-142
1143	0.15	0.85	"	7.99	6.76	27.8	1179	0.32	1.32	"	"	-143

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DVW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1145	SAMPLING ENDED AT: 1149
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-27	3	CB	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0030	SAMPLE ID: M505-MW0030-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.57	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1202	PURGING ENDED AT: 1219	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1210	0.40	0.40	0.05	8.69	7.20	26.8	1609	0.75	2.33	clear	none	-107
1213	0.15	0.55	|	8.70	7.19	26.6	1635	0.42	2.46	|	|	-117
1216	0.15	0.70	|	8.70	7.19	26.5	1643	0.30	1.91	|	|	-127
1219	0.15	0.85	|	8.70	7.19	26.7	1653	0.28	2.74	|	|	-132

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1221	SAMPLING ENDED AT: 1225
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
mw30	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0029	SAMPLE ID: M505-MW0029-025-0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.60	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1315	PURGING ENDED AT: 1332	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1323	0.40	0.40	0.05	5.80	7.08	27.0	1532	0.47	2.20	clear	none	-122
1326	0.15	0.55	"	5.80	7.07	26.9	1544	0.36	1.22	"	"	-127
1329	0.15	0.70	"	5.80	7.07	26.8	1550	0.36	0.84	"	"	-129
1332	0.15	0.85	"	5.80	7.07	27.0	1552	0.36	0.61	"	"	-129

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1334	SAMPLING ENDED AT: 1338
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-29	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Revision Date: March 9, 2014

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI - Prof. Series **INSTRUMENT #** 10D101439

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A D.O. 100% ambient air Standard C pH: 4.00

Standard B pH 7.00 Standard D Cond. 1,000 uS/cm

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/05/19	0840	A	100%	101.0	1.0	Y	Init.	DVW
	0843	B	7.00	7.00	0.0			
	0846	C	4.00	4.01	0.3			
	0854	D	1,000	1,000	0.0			
	1712	A	100%	96.3	3.7	N	Cont	
	1715	B	7.00	6.92	1.2			
	1718	C	4.00	4.05	1.3			
↓	1720	D	1,000	994	0.6			
15/05/20	0852	A	100%	100.8	0.8	Y	Init	
	0855	B	7.00	7.00	0.0			
	0859	C	4.00	4.00	0.0			
	0904	D	1,000	999	0.1			
	1359	A	100%	107.8	7.8	N	Cont	
	1402	B	7.00	7.02	0.3			
	1405	C	4.00	4.06	1.5			
↓	1409	D	1,000	994	0.6			
		A						
		B						
		C						
		D						
		A						
		B						
		C						
		D						

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) LaMotte 2020we **INSTRUMENT #** 3931-4913

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☑ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0 *Standard C* _____

Standard B 10.0 *Standard D* _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/05/19	0903	A	0.0	0.01	—	y	Init	DJW
"	0905	B	10.0	9.98	0.2	y	Init	DJW
	"	C	"	"		"	"	"
	"	D	"	"		"	"	"
15/05/19	1725	A	0.0	0.13	—	N	Cont	DJW
15/05/19	1726	B	10.0	10.11	1.1	N	Cont	DJW
"	"	C	"	"	"	"	"	"
"	"	D	"	"	"	"	"	"
15/05/20	0906	A	0.0	0.10	—	y	Init	DJW
15/05/20	0907	B	10.0	9.95	0.5	y	Init	DJW
"	"	C	"	"	"	"	"	"
"	"	D	"	"	"	"	"	"
15/05/20	1411	A	0.0	0.06	—	N	Cont	DJW
15/05/20	1412	B	10.0	9.98	0.2	N	Cont	DJW
		C						
		D						
		A						
		B						
		C						
		D						
		A						
		B						
		C						
		D						

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 10E100125

PARAMETER: *[check only one]*

☐ TEMPERATURE ☒ CONDUCTIVITY ☐ SALINITY ☒ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☒ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 Standard D 100% Amb Air
Standard B 7.00
Standard C 1000 us/cm

DATE (mm/dd/yy)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/05/19	0840	A	4.01	4.05	1%	Yes	INIT	DJD
15/05/19	0842	B	7.00	7.07	1%	Yes	INIT	DJD
15/05/19	0844	C	1000	999	0	NC	INIT	DJD
15/05/19	0847	D	100%	105%	15%	Yes	INIT	DJD
15/05/19	1800	A	4.01	4.02	-	NO	~~FINAL~~/C	DJD
15/05/19	1802	B	7.00	7.01	-	NO	~~FINAL~~/C	DJD
15/05/19	1804	C	1000	997	-	NO	~~FINAL~~/C	DJD
15/05/19	1807	D	100%	99.4%	-	NC	~~FINAL~~/C	DJD
15/05/20	0841	A	4.01	4.01	-	NO	~~INIT~~/C	DJD
15/05/20	0843	B	7.00	7.00	-	NO	~~INIT~~/C	DJD
15/05/20	0846	C	1000	992	-	NO	~~INIT~~/C	DJD
15/05/20	0851	D	100%	99.2%	-	NO	~~INIT~~/C	DJD
15/05/20	1410	A	4.01	4.03	-	NO	~~FINAL~~/C	DJD
15/05/20	1412	B	7.00	7.03	-	NO	~~FINAL~~/C	DJD
15/05/20	1413	C	1000	993	-	NO	~~FINAL~~/C	DJD
15/05/20	1416	D	100%	98.9%	-	NO	~~FINAL~~/C	DJD
		A	4.01				INIT	
		B	7.00				INIT	
		C	1000				INIT	
		D	100%				INIT	
		A	4.01				FINAL	
		B	7.00				FINAL	
		C	1000				FINAL	
		D	100%				FINAL	

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) LAMOTTE 2020 (DO) **INSTRUMENT #** 13080C0277F7

PARAMETER: *[check only one]* HACH 2100 Q

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP

☐ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A ~~1.0~~ 10

Standard B ~~10.0~~ 20

Standard C (10) Isopropyl % Cal'd?

15/05/19	0849	A	10	10.0	-	NO	INIT	DDD
15/05/19	0851	B	20.0	20.0	-	NO	INIT	DDD
15/05/20	0901	A	10	10.1	-	Yes	FINAL	DDD
15/05/20	0905	B	20.0	20.2	-	Yes	FINAL	DDD
		A	10				INIT	
		B	20.0				INIT	
		A	10				FINAL	
		B	20				FINAL	
		A	10				INIT	
		B	20.0				INIT	
		A	10				FINAL	
		B	20.0				FINAL	
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	

US Environmental Rental Corporation

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5C South Gold Dr, Hamilton, NJ 08691 (609) 570-8555
1202 Tech Blvd., Suite 108, Tampa, FL 33619 (813) 628-4200

Order No.: RS00911
Date: 5/15/2015
Technician: SJ

Company: Arcadis
Contact: Dave Dankerl
Phone #: #N/A

Packing List

Item	Serial Number	Tech	QC
Pro Series	10F011Q	✓	
Handheld Display	10E100125U	✓	

Item	Tech	QC	Item	Tech	QC
Cable 4M	✓		AC Adaptor		
Flow Cell	✓		Stand		
Barb Kit	✓		D.O Kit	✓	
Storage / Cal Cup			Calibration Kit	✓	
Sensor Guard	✓				
Manual	✓				
Sonde Cap					
Software					
Extra Batteries	✓				
Display Comm. Cable	✓				
Sonde Comm. Cable					

Calibration Report

Pro Series		10F011Q		
Parameter	**Accuracy**	**Before**	**After**	**Lot #**
Conductivy 1000 µs/cm	(+/-.5%)	1019	1000	150415A
pH 7 Buffer	(+/- .2)	7.46	7.00	150415C
pH mV for 7 Buffer	(0 +/- 50)		**-26.5**	
pH 4 Buffer	(+/- .2)	4.45	4.00	150415B
pH mV for 4 Buffer	(180 +/- 50)		**150.1**	
pH 10 Buffer	(+/- .2)	10.22	10.01	#REF!
pH mV for 10 Buffer	(-180 +/- 50)		**-187.4**	
ORP mV, 237.5	(+/- 20 mV)	165.0	200.00	150223F
DO 100% Sat	(+/- 2%)	99.6%	101.1%	
0% DO Check	(+/- 2%)		0.60	PS1
Turbidity 0 NTU	(+/- 5%)			
Turbidity 126 NTU	(+/- 5%)			

This document certifies that US Environmental Rental Corporation has provided this rental equipment and all accessories in good working order. It is the renter's responsibility to: a) review all included items upon receipt, b) verify that all items are in acceptable condition and function properly, and c) contact a US Environmental associate immediately if any item is missing, damaged, and/or not functioning properly. Any delay in notifying US Environmental will be considered as the Renter taking responsibility for such missing, damaged, and/or malfunctioning item.

Missing, damaged, and/or malfunctioning equipment and accessories will result in additional fees.

5/18/15

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA - M-505		**Project Location:** Cape Canaveral	
Date: 5/18/15	**Time:** 1020	**Conducted by:** DW	**Signature/Title:** Tech-5
Client: NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:**

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Open wells 3 Sample wells 5

2 Collect water levels 4 6

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: none

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☑ Not applicable		☐ Working at Height		☐ Confined Space	
☐ Energy Isolation (LOTO)		☐ Excavation/Trenching		☐ Hot Work	
☐ Mechanical Lifting Ops		☐ Overhead & Buried Utilities		☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes:**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☑ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☑ Staff has appropriate PPE?	☑ Staff knows Emergency Plan (EAP)?	☑ All equipment checked & OK?
		☑ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and **Assess the Risks** (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☐ Gravity (i.e., ladder, scaffold, trips) (L M H)	☑ Motion (i.e., traffic, moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)	
☐ Electrical (i.e., utilities, lightning) (L M H)	☑ Pressure (i.e., gas cylinders, wells) (L M H)	☑ Environment (i.e., heat, cold, ice) (L M H)	
☐ Chemical (i.e., fuel, acid, paint) (L M H)	☑ Biological (i.e., ticks, poison ivy) snakes, insects (L M H)	☑ Radiation (i.e., alpha, x-ray, laser) (L M H)	
☐ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☑ Driving (i.e., car, ATV, boat, dozer) (L M H)	

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☑ General PPE Usage	☐ Hearing Conservation	☑ Respiratory Protection
☐ Personal Hygiene	☐ Exposure Guidelines	☑ Decon Procedures
☐ Emergency Action Plan (EAP)	☐ Fall Protection	☑ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☐ Traffic Control
☐	☐	☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	Reviewed and understand the HASP
David Weld AUS	AW/KMS 0720		
David DanKert AUS			

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3750.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9558 and Corp H&S at 1.720.344.3500

Visitor Name/Co. - not involved in work

In	Out
In	Out
In	Out
In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain:)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work Interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

5/19/15

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: 1505		Project Location: KSC NASA	
Date: 5/19/15	Time: 0831	Conducted by: DAVID D	Signature/Title: [signature] Tech
Client: NASA		Client Contact: Harry Plaza	Subcontractor companies: —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Sample wells 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height	_____	☐ Confined Space	_____
☐ Energy Isolation (LOTO)	_____	☐ Excavation/Trenching	_____	☐ Hot Work	_____
☐ Mechanical Lifting Ops	_____	☐ Overhead & Buried Utilities	_____	☐ Other permit	_____

Discuss following questions *(for crews review previous day's past activities).* **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and Assess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☐ Gravity (i.e., ladder, scaffold, trips)	(L M H)	☒ Motion (i.e., traffic, moving water)	(L M H)	☒ Mechanical (i.e., augers, motors)	(L M H)
☒ Electrical (i.e., utilities, lightning)	(L M H)	☒ Pressure (i.e., gas cylinders, wells)	(L M H)	☒ Environment (i.e., heat, cold, ice)	(L M H)
☒ Chemical (i.e., fuel, acid, paint)	(L M H)	☒ Biological (i.e., ticks, poison ivy)	(L M H)	☒ Radiation (i.e., alpha, sun, laser)	(L M H)
☒ Sound (i.e., machinery, generators)	(L M H)	☐ Personal (i.e. alone, night, not fit)	(L M H)	☐ Driving (i.e. car, ATV, boat, dozer)	(L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☒ Administrative controls	☒ Monitoring
☒ General PPE Usage	☒ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☒ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	Have read and understand the HASP
David Dankert / Arcadis / [signature]	0831		
David Wells / AECOM	0830		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9555 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

_____	In	Out
_____	In	Out
_____	In	Out
_____	In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end-of-day or before next day's work (Check those applicable and explain:)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work Interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

5/20/15

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: NASA MSFC		**Project Location:** KSC NASA	
Date: 5/20/15	**Time:** 0830	**Conducted by:** DAVED	**Signature/Title:**
Client NASA		**Client Contact:** Harry Plaza	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 Sample Wells 3 Develop ASwells

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issurance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height	_____	☐ Confined Space	
☐ Energy Isolation (LOTO)	_____	☐ Excavation/Trenching	_____	☐ Hot Work	
☐ Mechanical Lifting Ops	_____	☐ Overhead & Buried Utilities	_____	☐ Other permit	

Discuss following questions (for some review previous day's post activities). **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work Interventions yesterday?
☐ JLAs or procedures are available?	☒ Field teams to "dirty" JLAs, as needed?	☐ if deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and Assess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category

☒ Gravity (i.e., ladder, scaffold, trips) (L M H)	☒ Motion (i.e., traffic, moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)
☑ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H)	☒ Biological (i.e., ticks, poison ivy) (L M H)	☒ Radiation (i.e., alpha, sun, laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H)	☒ Personal (i.e. alone, night, not fit) (L M H)	☒ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes.

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☒ Engineering controls	☒ Administrative controls	☒ Monitoring
☒ General PPE Usage	☒ Hearing Conservation	☒ Respiratory Protection
☒ Personal Hygiene	☒ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☒ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify lob/JLA)*	☒ Traffic Control
		☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign In Time	Initial & Sign out Time	I have read and understand the HASP
David Dankert / Arcadis	0830	0830	☒
Dan Wells / Arcadis	0830		☒

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3644.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3644 and then Corp Legal at 1.720.344.3756.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.379.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

In	Out	
In	Out	
In	Out	
In	Out	

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end of day or before next day's work (Check those applicable and explain:)

☐ Lessons learned and best practices learned today: _____

☐ Incidents that occurred today: _____

☐ Any Stop Work Interventions today? _____

☐ Corrective/Preventive Actions needed for future work: _____

☐ Any other H&S Issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

5/21/15

ARCADIS

Document Control Number:TGM - _____

TGM + *project number plus date as follows: xxxxxxxx.xxxx.xxxxx - dd/mm/year*

TAILGATE HEALTH & SAFETY MEETING FORM

This form documents the tailgate meeting conducted in accordance with the Project HASP. Personnel who perform work operations on-site during the day are required to attend this meeting and to acknowledge their attendance, at least daily.

Project Name: MSO.5		**Project Location:** KSC NASA	
Date: 5/21/15	**Time:** 0930	**Conducted by:** DAVE+DAVE	**Signature/Title:**
Client: NASA		**Client Contact:** HARRY PLUMB	**Subcontractor companies:** —

TRACKing the Tailgate Meeting

Think through the Tasks (list the tasks for the day):

1 SYSTEM OPS 3 _____ 5 _____

2 _____ 4 _____ 6 _____

Other Hazardous Activities - Check the box if there are any other ARCADIS, Client or other party activities that may pose hazards to ARCADIS operations ☐ If there are none, write "None" here: _____

If yes, describe them here: _____

How will they be controlled? _____

Prework Authorization - check activities to be conducted that require permit issuance or completion of a checklist or similar before work begins:

	Doc #		Doc #		Doc #
☒ Not applicable		☐ Working at Height	_____	☐ Confined Space	_____
☐ Energy Isolation (LOTO)	_____	☐ Excavation/Trenching	_____	☐ Hot Work	_____
☐ Mechanical Lifting Ops	_____	☐ Overhead & Buried Utilities	_____	☐ Other permit	_____

Discuss following questions (for some review previous day's past activities) **Check if yes :**

☐ Incidents from day before to review?	☐ Lessons learned from the day before?	☐ Topics from Corp H&S to cover?
☐ Any corrective actions from yesterday?	☐ Will any work deviate from plan?	☐ Any Stop Work interventions yesterday?
☐ JLAs or procedures are available?	☐ Field teams to "dirty" JLAs, as needed?	☐ If deviations, notify PM & client
☒ Staff has appropriate PPE?	☒ Staff knows Emergency Plan (EAP)?	☒ All equipment checked & OK?
		☒ Staff knows gathering points?

Comments: _____

Recognize the hazards (check all those that are discussed) (Examples are provided) and Assess the Risks (Low, Medium, High - circle risk level) - Provide an overall assessment of hazards to be encountered today and briefly list them under the hazard category.

☒ Gravity (i.e., ladder, scaffold, trips) (L M H)	☒ Motion (i.e., traffic, moving water) (L M H)	☐ Mechanical (i.e., augers, motors) (L M H)
☒ Electrical (i.e., utilities, lightning) (L M H)	☒ Pressure (i.e., gas cylinders, wells) (L M H)	☒ Environment (i.e., heat, cold, ice) (L M H)
☒ Chemical (i.e., fuel, acid, paint) (L M H)	☒ Biological (i.e., ticks, poison ivy) (L M H)	☒ Radiation (i.e., alpha, sun, laser) (L M H)
☒ Sound (i.e., machinery, generators) (L M H)	☐ Personal (i.e. alone, night, not fit) (L M H)	☐ Driving (i.e. car, ATV, boat, dozer) (L M H)

Continue TRACK Process on Page 2

TAILGATE HEALTH & SAFETY MEETING FORM - Pg. 2

Control the hazards (Check all and discuss those methods to control the hazards that will be implemented for the day): Review the HASP, applicable JLAs, and other control processes. Discuss and document any additional control processes:

☒ **STOP WORK AUTHORITY** (Must be addressed in every Tailgate meeting - *(See statements below)*

☐ Elimination	☐ Substitution	☐ Isolation
☐ Engineering controls	☐ Administrative controls	☐ Monitoring
☒ General PPE Usage	☒ Hearing Conservation	☐ Respiratory Protection
☒ Personal Hygiene	☐ Exposure Guidelines	☒ Decon Procedures
☒ Emergency Action Plan (EAP)	☐ Fall Protection	☒ Work Zones/Site Control
☐ JLA to be developed/used *(specify)*	☐ LPO conducted *(specify job/JLA)*	☐ Traffic Control
☐	☐	☐ Other *(specify)*

Signature and Certification Section - Site Staff and Visitors

Name/Company/Signature	Initial & Sign in Time	Initial & Sign out Time	Initials read and understand the HASP
David Dankevl / Arcadis	0930		
Dave Wells / AUS	0930		

Important Information and Numbers

All site staff should arrive fit for work. If not, they should report to the supervisor any restrictions or concerns.

In the event of an injury, employees will call WorkCare at 1.800.455.6155 and then notify the field supervisor who will, in turn, notify Corp H&S at 1.720.344.3844.

In the event of a motor vehicle accident, employees will notify the field supervisor who will then notify Corp H&S at 1.720.344.3844 and then Corp Legal at 1.720.344.3758.

In the event of a utility strike or other damage to property of a client or 3rd party, employees will immediately notify the field supervisor, who will then immediately notify Corp Legal at 1.678.373.9556 and Corp H&S at 1.720.344.3500

Visitor Name/Co - not involved in work

_____	In	Out
_____	In	Out
_____	In	Out
_____	In	Out

I will STOP the job any time anyone is concerned or uncertain about health & safety or if anyone identifies a hazard or additional mitigation not recorded in the site, project, job or task hazard assessment.

I will be alert to any changes in personnel, conditions at the work site or hazards not covered by the original hazard assessments.

If it is necessary to STOP THE JOB, I will perform TRACK; and then amend the hazard assessments or the HASP as needed.

I will not assist a subcontractor or other party with their work unless it is absolutely necessary and then only after I have done TRACK and I have thoroughly controlled the hazard.

Post Daily Activities Review - Review at end-of day or before next day's work (Check those applicable and explain:)

- ☐ Lessons learned and best practices learned today: _____
- ☐ Incidents that occurred today: _____
- ☐ Any Stop Work interventions today? _____
- ☐ Corrective/Preventive Actions needed for future work: _____
- ☐ Any other H&S issues: _____

Keep H&S 1st in all things

WorkCare - 1.800.455.6155
Near Loss Hotline - 1.866.242.4304

Drum and Bin Tracking Sheet

Project No: TL014020.0003
Site Name: VAB MA505

Project Manager: Scott Starr
Project Location: BLD M7-505 KSC Ind Area

Pallet ID/ Bar Code	Drum No.	Drum Bar Code	% Full	Contents	Source Location (Well #, Boring #, etc.	Date Generated	Sampling Date	Storage Area
177813	1	198396	85	purge water multiple wells	multiple wells pH = 7.48	5/19/15 thru 5/20/15	5/19/15 thru 5/20/15	Behind POL
	2							
	3							
	4							

Content Codes:
Decon = decon water
Dev = development water
PW = purge water
S = soil

9/29/15 NASA M505

TL0140020.0000c_00004 ~07B

0730 Mob to NASA

0930 onsite ZZ9469 (clear)

- H+S meeting.
- Organize EQP
- Cal meters

1200-1230 - lunch.

- Setup for Sampling.

1333 M505-MW00013.5-025.5-20150928

1420 M505-MW0039-032.5-20150928

1504 M505-MW0044-027.5-20150928

1545 M505-MW0041-025.0-20150928

1624 M505-MW0042-035.0-20150928

1707 M505-MW0023-025.0-20150928

- Post cal / Dump water / Prep Drum

1800 off base / END of DAY

(10.5) - 0.5 (lunch) = (10)

DR# 198383
Pal# 177813

(SLF) Phase I lightning @ 15:15

9/29/15 NASA M505

0900 onsite, H+S meeting, cal meters

1020 MW0038-025.0-20150929 sampled

1100 MW0020-036.0-20150929 sampled

1146 MW0046-027.5-20150929 sampled

1240 MW0018-036.0-20150929 sampled

1328 MW0022-025.0-20150929 sampled

1422 MW0027-025.0-20150929 sampled

1454 MW0028-025.0-20150929 sampled

- Post cal / Dump water
- COC work, secure samples

1630 off site

1645 samples shipped / Demob

1830 End of DAY

(9.5)

(OC) ✓

*1 FB BLANK

End mileage
72,950

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505		SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-0049	SAMPLE ID: M505-MW0049-027.5-20150929		DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 8.13	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= 3 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1029	PURGING ENDED AT: 1046	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	
1037	0.40	0.40	0.05	8.18	6.61	25.0	2703	0.36	2.8	clear	none	FND
1040	0.15	0.55	|	8.18	6.62	24.9	2692	0.34	2.4	|	|	-111
1043	0.15	0.70	|	8.17	6.62	24.9	2681	0.29	1.7	|	|	-112
1046	0.15	0.85	|	8.17	6.62	24.9	2673	0.27	2.1	|	|	-114
												-115

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Arnold	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1048	SAMPLING ENDED AT: 1051
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-49	3	CG	40mL	HCL	—	—	8260D	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-M505	SITE LOCATION:	Cape Canaveral FL
WELL NO:	MW0059	SAMPLE ID:	M505-MW0059-025.0-20150929
		DATE:	9/29/15

PURGING DATA

WELL DIAMETER (inches):	1	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	7.61	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	1425	PURGING ENDED AT:	1442	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (ppm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or mS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1433	0.40	0.40	0.05	7.69	6.60	26.9	1164	0.32	2.9	Clear	None	-89
1436	0.15	0.55	"	7.69	6.60	26.9	1164	0.32	3.2	"	"	-89
1439	0.15	0.70	"	7.69	6.60	26.9	1164	0.27	1.8	"	"	-90
1442	0.15	0.85	"	7.69	6.60	26.9	1163	0.23	1.1	"	"	-92

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DJW / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1444	SAMPLING ENDED AT:	1447
PUMP OR TUBING DEPTH IN WELL (feet):	25	SAMPLE PUMP FLOW RATE (mL per minute):	~190	TUBING MATERIAL CODE:	HDPE		
FIELD DECONTAMINATION:	Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ___ µm	DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-59	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505		SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-0057	SAMPLE ID: M505-MW0057-0250-20150929		DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 3.74	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + 0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1346	PURGING ENDED AT: 1407	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	
1354	0.40	0.40	0.05	3.85	6.72	26.9	1204	0.36	2.4	clear	none	-95
1357	0.15	0.55	|	3.86	6.72	26.9	1210	0.30	2.8	|	|	-96
1400	0.15	0.70	|	3.86	6.71	26.8	1211	0.25	1.9	|	|	-97
1403	0.15	0.85	|	3.86	6.71	26.8	1212	0.24	0.93	|	|	-99

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DWL/Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1405	SAMPLING ENDED AT: 1408
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-57	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505		SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW0021	SAMPLE ID: M505-MW0021-025.0-20150929		DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 2.78	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1310	1327	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or (S/cm))	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1318	0.40	0.40	0.05	2.93	7.19	26.7	749	0.36	2.2	Clear	none	-131
1321	0.15	0.55	|	2.95	7.19	26.6	774	0.28	1.8	|	|	-135
1324	0.15	0.70	|	2.95	7.18	26.5	786	0.26	1.9	|	|	-137
1327	0.15	0.85	|	2.95	7.18	26.5	787	0.26	2.1	|	|	-139

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1329	SAMPLING ENDED AT: 1332
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-21	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505		SITE LOCATION: Cape Canaveral FL	
WELL NO: MW0030	SAMPLE ID: M505-MW0030-025.0-20150929		DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.98	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1225	PURGING ENDED AT: 1242	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1233	0.40	0.40	0.05	7.08	7.15	25.1	1551	0.26	6.3	Clear	none	-146
1236	0.15	0.55	"	7.08	7.16	25.2	1592	0.23	6.6	"	"	-149
1239	0.15	0.70	"	7.08	7.16	25.2	1608	0.22	4.2	"	"	-147
1242	0.15	0.85	"	7.08	7.17	25.2	1617	0.21	4.4	"	"	-148

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJL / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1244	SAMPLING ENDED AT: 1247
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW30	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

0

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL
WELL NO: MW-0035	SAMPLE ID: MW505-MW0035-025.0-20150929
	DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 3.90	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0954	PURGING ENDED AT: 1011	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1002	0.40	0.40	0.05	4.07	6.59	24.8	2809	0.33	5.6	Clear	None	-98
1005	0.15	0.55	|	4.07	6.61	24.7	2808	0.30	4.3	|	|	-99
1008	0.15	0.70	|	4.07	6.63	24.8	2805	0.28	6.7	|	|	-100
1011	0.15	0.85	|	4.06	6.64	24.8	2816	0.31	7.1	|	|	-98

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW/Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1013	SAMPLING ENDED AT: 1016
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ___ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW35	3	CG	40ml	HCl	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MASA-M505	SITE LOCATION: Cape Canaveral, FL
WELL NO: MW-0025	SAMPLE ID: M505-MW0025-025.0-20150929
	DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.62	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1109	1126	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or mS/cm)	DISSOLVED OXYGEN (circle mg/l or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1117	0.40	0.40	0.05	7.77	6.48	24.7	3498	0.28	7.6	Clear	none	-85
1120	0.15	0.55	"	7.77	6.48	24.7	3495	0.28	6.8	"	"	-85
1123	0.15	0.70	"	7.76	6.48	24.6	3493	0.26	4.3	"	"	-86
1126	0.15	0.85	"	7.76	6.48	24.6	3485	0.23	4.7	"	"	-87

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DW/Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1128	SAMPLING ENDED AT: 1131
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type: ____ FILTER SIZE: ____ µm	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW25	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA MSDS	SITE LOCATION: KSC NASA	
WELL NO: MW003F	SAMPLE ID: MSDS-MW003F-025.0-20150929	DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.80	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .13 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0950	PURGING ENDED AT: 1019	TOTAL VOLUME PURGED (gallons): 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1010	1.0	1.0	0.05	5.94	6.44	26.69	3531	0.36	6.17	clear	none	-3
1013	0.15	1.15	0.05	5.94	6.44	26.71	3529	0.35	5.87	↓	↓	-5
1016	0.15	1.30	0.05	5.95	6.44	26.72	3527	0.33	4.38			-7
1019	0.15	1.45	0.05	5.94	6.45	26.75	3526	0.31	5.18			-9

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Danker / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1020	SAMPLING ENDED AT: 1023
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~200	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW003F	3	CG	40ml	HCl	—	—	8260	Bff ~200

REMARKS: Sampled @ 1020

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA MSDS	SITE LOCATION: KSC NASA
WELL NO: MW0020	SAMPLE ID: MSDS-MW0020-026.0-20150929
	DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 5.90	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .13 gallons = .19 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36	PURGING INITIATED AT: 1036	PURGING ENDED AT: 1059	TOTAL VOLUME PURGED (gallons): 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1050	1.0	1.0	0.05	6.07	6.64	27.14	3507	0.36	15.1	clear	none	+43
1053	0.15	1.15	0.05	6.07	6.64	27.14	3507	0.37	14.7	↓		+42
1056	0.15	1.30	0.05	6.08	6.64	27.16	3505	0.36	15.2			+42
1059	0.15	1.45	0.05	6.07	6.64	27.17	3503	0.35	13.8			+41

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1100	SAMPLING ENDED AT: 1103
PUMP OR TUBING DEPTH IN WELL (feet): 36	SAMPLE PUMP FLOW RATE (mL per minute): ~200	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW0020	3	CG	40ml	HCl	–	–	8260	APP

REMARKS:

1100

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M 505	SITE LOCATION:	KSC-NASA
WELL NO:	MW-004F	SAMPLE ID:	M505-MW004F-027.5-20150928
		DATE:	7/28/15

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	20 feet to 35 feet	STATIC DEPTH TO WATER (feet):	5.89	PURGE PUMP TYPE OR BAILER:	

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (35 feet − 5.89 feet) X .04 gallons/foot = 1.16 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (.00 gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	27.5	PURGING INITIATED AT:	1112	PURGING ENDED AT:	1145	TOTAL VOLUME PURGED (gallons):	1.65

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1136	1.2	1.2	0.05	6.08	6.55	27.65	3103	0.24	8.16	clear	none	-41
1139	0.15	1.35	0.05	6.08	6.55	27.65	3100	0.23	6.87	↓	↓	-42
1142	0.15	1.50	0.05	6.09	6.55	27.69	3098	-.22	7.14			-42
1145	0.15	1.65	0.05	6.08	6.56	27.71	3096	-.20	6.29			-43

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankert / Arcadis	SAMPLER(S) SIGNATURES:		SAMPLING INITIATED AT:	1146	SAMPLING ENDED AT:	1149
PUMP OR TUBING DEPTH IN WELL (feet):	27.5	SAMPLE PUMP FLOW RATE (mL per minute):	~200	TUBING MATERIAL CODE:	HDPE		
FIELD DECONTAMINATION:	Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW004F	3	CG	40ml	HCL	—	—	8260	APP

REMARKS:

1146

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC - NASA	
WELL NO:	MW001R	SAMPLE ID:	M505-MW001R-036.0-20150429	DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1"	3/16	33.5 TO 38.5	5.89	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + 0.13 gallons = .18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
36	36	1210	1239	1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1230	1.0	1.0	0.05	6.04	6.61	27.01	3183	0.22	12.9	clear	none	+32
1233	0.45	1.45	0.05	6.04	6.61	27.02	3183	0.21	11.4	↓	↓	+32
1236	0.5	1.30	0.05	6.04	6.61	27.04	3182	0.20	10.7			+31
1239	0.15	1.45	0.05	6.04	6.61	27.05	3182	0.18	11.6			+31

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dunham / Arcadis		1240	1243

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: ~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
36			

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW001R	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1240

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)**

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505		SITE LOCATION: KSC - NASA	
WELL NO: MW0022	SAMPLE ID: M505-MW0022-025.0-20150924		DATE: 9/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 TO 27.5	STATIC DEPTH TO WATER (feet): 6.12	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + 0.13 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1258	PURGING ENDED AT: 1327	TOTAL VOLUME PURGED (gallons): 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1318	1.0	1.0	0.05	6.23	6.69	27.60	2536	0.28	2.16	clear	None	-63
1321	0.15	1.15	0.05	6.23	6.69	27.59	2536	0.28	1.98			-63
1324	0.15	1.30	0.05	6.24	6.69	27.58	2534	0.27	2.34			-63
1327	0.15	1.45	0.05	6.23	6.69	27.57	2532	0.26	1.14			-64

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankol / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1328	SAMPLING ENDED AT: 1331
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: ~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0022	3	G	40ml	HCl	–	–	8260	APP	200

REMARKS: 1328

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA - M505		SITE LOCATION: KSC - NASA	
WELL NO: MW0027	SAMPLE ID: M505-MW0027-025.0-20150922a		DATE: 9/22/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 TO 27.5	STATIC DEPTH TO WATER (feet): 6.40	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + 0.13 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1342	1411	1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1402	1.0	1.0	0.05	6.52	6.76	27.29	1261	0.21	2.36	clear	none	-67
1405	0.15	1.15	0.05	6.52	6.76	27.31	1261	0.20	3.17	↓	↓	–
1408	0.15	1.30	0.05	6.53	6.75	27.33	1263	0.19	3.33			–
1411	0.15	1.45	0.05	6.52	6.75	27.34	1264	0.17	3.06			–

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016
PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1412	SAMPLING ENDED AT: 1415
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: ~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0027	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1412

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505		SITE LOCATION: KSC - NASA	
WELL NO: MW0028	SAMPLE ID: M505-MW0028-025.0-20150929		DATE: 9/29/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 TO 27.5	STATIC DEPTH TO WATER (feet): 2.13	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 35 feet) + 0.13 gallons = .18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1424	PURGING ENDED AT: 1453	TOTAL VOLUME PURGED (gallons): 1.41

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1424	1.0	1.0	0.05	2.41	6.87	26.44	1152	0.20	6.14	clear	none	-73
1447	0.15	1.15	0.05	2.42	6.87	26.41	1153	0.18	7.02	↓	↓	-74
1450	0.15	1.30	0.05	2.42	6.87	26.42	1152	0.17	6.78			-75
1453	0.15	1.45	0.05	2.42	6.87	26.43	1151	6.18	5.78			-78

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1454	SAMPLING ENDED AT: 1457
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: ~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0028	3	CG	40ml	HCl	–	–	8200	APP	~200

REMARKS: 1454

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - MSOS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0032	SAMPLE ID:	MSOS-MW 0032-035.0-20150928
		DATE:	9/28/15

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet):	8.02	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	35	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	35	PURGING INITIATED AT:	1629	PURGING ENDED AT:	1646	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/l or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1637	0.40	0.40	0.05	8.58	6.95	26.7	2615	0.25	2.4	Clear	None	-99
1640	0.15	0.55	|	8.61	6.94	26.3	2615	0.20	1.7	|	|	-84
1643	0.15	0.70	|	8.63	6.94	26.2	2615	0.18	0.88	|	|	-78
1646	0.15	0.85	|	8.64	6.94	26.2	2615	0.14	0.74	|	|	-59

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DJW / Arcadis	SAMPLER(S) SIGNATURES:		SAMPLING INITIATED AT:	1648	SAMPLING ENDED AT:	1651
PUMP OR TUBING DEPTH IN WELL (feet):	35	SAMPLE PUMP FLOW RATE (mL per minute):	~190	TUBING MATERIAL CODE:	HDPE		
FIELD DECONTAMINATION:	Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm		DUPLICATE:	Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-32	3	CG	40mL	HCL	—	—	8260D	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-0033	SAMPLE ID: M505-MW0033-25.0-20150928	DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.89	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1554	PURGING ENDED AT: 1611	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/l or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1602	0.40	0.40	0.05	8.02	6.72	27.3	2630	0.25	1.4	Clear	none	-45
1605	0.15	0.55	|	8.02	6.72	27.3	2631	0.21	1.6	|	|	-47
1608	0.15	0.70	|	8.02	6.73	27.3	2631	0.19	2.1	|	|	-48
1611	0.15	0.85	|	8.03	6.73	27.2	2633	0.19	1.7	|	|	-49

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: OVW / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1613	SAMPLING ENDED AT: 1616
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm Filtration Equipment Type:	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-33	3	CG	40mL	HCl	–	–	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA- M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0051	SAMPLE ID:	M505-MW-0051-025.0-20159 28
		DATE:	9/28/15

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	6.88	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	1513	PURGING ENDED AT:	1530	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1521	0.40	0.40	0.05	7.43	7.08	27.7	2617	0.02	2.6	Clear	None	-207
1524	0.15	0.55	1	7.43	6.98	27.3	2660	0.03	1.9	"	"	-201
1527	0.15	0.70	"	7.44	6.93	27.2	2669	0.06	1.7	"	"	-200
1530	0.15	0.85	"	7.44	6.90	27.1	2671	0.06	2.3	"	"	-197

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DW / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1532	SAMPLING ENDED AT:	1535
PUMP OR TUBING DEPTH IN WELL (feet):	25	SAMPLE PUMP FLOW RATE (mL per minute):	~190	TUBING MATERIAL CODE:	HDPE		
FIELD DECONTAMINATION: Y (N)		FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-51	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MASA-MSOS		SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-0052	SAMPLE ID: MSOS-MW0052-010.0-20150928		DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 7.07	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 25 feet) + 0.1 gallons = 0.14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
10	10	1425	1447	1.1

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1433	0.40	0.40	0.05	7.18	5.05	28.1	224	0.30	27	Brown	none	+21
1442	0.50	0.90	|	7.18	5.07	28.0	224	0.22	14.8	|	|	+11
1445	0.10	1.00	|	7.18	5.08	28.0	224	0.18	18.7	|	|	+10
1447	0.10	1.10	|	7.18	5.08	28.0	224	0.18	16.6	|	|	+8

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW / Arcadis		1449	1452

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
10	~190	HDPE

FIELD DECONTAMINATION: Y (N) FIELD-FILTERED: Y (N) FILTER SIZE: ____ µm DUPLICATE: Y (N)
Filtration Equipment Type: ____

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-52	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-0053	SAMPLE ID: M505-MW-0053-010.0-20150928	DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches):	2	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	5 feet to 15 feet	STATIC DEPTH TO WATER (feet):	5.88	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.1 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	10.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	10.0	PURGING INITIATED AT:	1347	PURGING ENDED AT:	1404	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1355	0.40	0.40	0.05	5.94	7.17	28.0	2439	0.33	1.4	Clear	none	-14
1358	0.15	0.55	"	5.94	7.17	27.9	2440	0.30	1.9	"	"	-15
1401	0.15	0.70	"	5.93	7.17	27.9	2437	0.27	1.6	"	"	-19
1404	0.15	0.85	"	5.93	7.17	27.9	2434	0.28	2.2	"	"	-20

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DVW / Arcadis	SAMPLER(S) SIGNATURES:		SAMPLING INITIATED AT:	1406	SAMPLING ENDED AT:	1409
PUMP OR TUBING DEPTH IN WELL (feet):	10.0	SAMPLE PUMP FLOW RATE (mL per minute):	~190	TUBING MATERIAL CODE:	HDPE		
FIELD DECONTAMINATION: Y (N)		FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-53	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL
WELL NO: MW-0055	SAMPLE ID: M505-MW0055-25.0-20150928 DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.85	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1306	PURGING ENDED AT: 1323	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1314	0.40	0.40	0.05	7.05	6.87	27.6	3326	0.34	1.0	Clear	None	-153
1317	0.15	0.55	"	7.05	6.94	27.0	3335	0.18	1.3	"	"	-148
1320	0.15	0.70	"	7.05	6.96	26.9	3336	0.13	3.66	"	"	-147
1323	0.15	0.85	"	7.05	6.98	26.9	3337	0.12	5.15	"	"	-142

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1325	SAMPLING ENDED AT: 1328
PUMP OR TUBING DEPTH IN WELL (feet): 25	SAMPLE PUMP FLOW RATE (mL per minute): ~190	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-55	3	CG	40mL	HCL	—	—	8260B	APP

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA · M505	SITE LOCATION: KSC NASA	
WELL NO: M505-MW0013FS	SAMPLE ID: M505-MW0013FS-0255-20150928	DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches): 2	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 TO 28	STATIC DEPTH TO WATER (feet): 6.40	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0016 gallons/foot X 40 feet) + 0.13 gallons = .18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1303	PURGING ENDED AT: 1332	TOTAL VOLUME PURGED (gallons): 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1323	1.0	1.0	0.05	6.67	6.78	29.94	1176	1.32	4.12	clear	NONE	+271
1326	0.15	1.15	0.05	6.68	6.78	29.96	1177	1.30	3.76	"	"	+271
1329	0.15	1.30	0.05	6.68	6.78	29.97	1178	1.28	3.61	"	"	+270
1332	0.15	1.45	0.05	6.67	6.78	29.97	1178	1.25	3.29	"	"	+270

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankal / ASRC	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1333	SAMPLING ENDED AT: 1336
PUMP OR TUBING DEPTH IN WELL (feet): 25.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0013FS	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1333

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-M505	SITE LOCATION:	ICSC NASA
WELL NO:	M505-MW0039-	SAMPLE ID:	M505-MW0039-032.5-20150928
DATE:	9/28/15		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	30 TO 35	STATIC DEPTH TO WATER (feet):	5.34	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 40 feet) + 0.13 gallons = .18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	32.5	PURGING INITIATED AT:	1350	PURGING ENDED AT:	1419	TOTAL VOLUME PURGED (gallons):	~~35~~ 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1410	1.0	1.0	0.05	5.39	6.55	30.11	3316	0.26	5.76	clear	none	-23
1413	0.15	1.15	0.05	5.40	6.55	30.12	3318	0.25	6.14	↓	↓	-24
1416	0.15	1.30	0.05	5.39	6.55	30.12	3320	0.25	6.03			-25
1419	0.15	1.45	0.05	5.40	6.56	30.14	3321	0.26	6.29			-25

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1420	SAMPLING ENDED AT:	1423
PUMP OR TUBING DEPTH IN WELL (feet):	32.5	TUBING MATERIAL CODE:	HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP Y (N)		TUBING Y (N) (replaced)		DUPLICATE: Y (N)			

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0039	3	CG	40ml	HCL	–	–	8260	APP	~200

REMARKS: 1420

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505 (NASA, KSC)		SITE LOCATION: KSC-NASA	
WELL NO: MW-44	SAMPLE ID: M505-MW0044-027.5-20150928		DATE: 9/28/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 TO 35	STATIC DEPTH TO WATER (feet): 5.11	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet – 5.11 feet) X .04 gallons/foot = 1.20 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + 0.13 gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1430	PURGING ENDED AT: 1503	TOTAL VOLUME PURGED (gallons): 1.65

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1454	1.20	1.20	0.05	5.24	6.51	29.51	3277	0.23	7.15	clear	None	-27
1457	0.15	1.35	0.05	5.24	6.51	29.47	3280	0.25	8.14	″	″	-28
1500	0.15	1.50	0.05	5.24	6.51	29.46	3285	0.28	8.65	″	″	-29
1503	0.15	1.65	0.05	5.24	6.52	29.48	3279	0.25	8.13	″	″	-29

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / ASRS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1504	SAMPLING ENDED AT: 1507
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: ~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-44	3	CG	40ml	HCl	—	—	8260	APP	~200

REMARKS: 1504

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-MSDS	SITE LOCATION:	KSC NASA
WELL NO:	MW0041	SAMPLE ID:	MSDS-MW0041-025-0-20150928
DATE:	9/28/15		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 TO 27.5	STATIC DEPTH TO WATER (feet):	5.94	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + 0.13 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	PURGING INITIATED AT:	1515	PURGING ENDED AT:	1544	TOTAL VOLUME PURGED (gallons):	1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1535	1.0	1.0	0.05	6.08	6.54	29.21	1818	0.32	11.10	clear	none	-62
1538	0.15	1.05	0.05	6.09	6.54	29.19	1820	0.31	10.17	↓	↓	-63
1541	0.15	1.30	0.05	6.09	6.55	29.18	1823	0.30	9.87			-64
1544	0.15	1.45	0.05	6.08	6.56	29.16	1826	0.31	9.64			-64

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1545	SAMPLING ENDED AT:	1548
PUMP OR TUBING DEPTH IN WELL (feet):	25'	TUBING MATERIAL CODE:	~~PE~~ HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION: PUMP	Y (N)	TUBING	Y (N) (replaced)	DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0041	3	CG	40ml	HCl	–	–	8260	APP	<200

REMARKS: 1545

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA - M505	SITE LOCATION: KSC - NASA
WELL NO: MW0042	SAMPLE ID: M505-MW0042-0350-20150928
DATE: 9/28/15	

PURGING DATA

WELL DIAMETER (inches): 4"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 6.99	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY (only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME (only fill out if applicable)

= gallons + (.0014 gallons/foot X 40 feet) + .13 gallons = ≈ 1.8 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1554	PURGING ENDED AT: 1623	TOTAL VOLUME PURGED (gallons): 1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1614	1.0	1.0	0.05	6.09	6.47	28.24	3458	0.30	8.14	clear	none	-49
1617	0.15	1.15	0.05	6.10	6.47	28.25	3457	0.28	6.29			-52
1620	0.15	1.30	0.05	6.10	6.47	28.24	3456	0.27	6.74			-52
1623	0.15	1.45	0.05	6.10	6.47	28.23	3454	0.26	6.24			-51

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT: 1624	SAMPLING ENDED AT: 1627
PUMP OR TUBING DEPTH IN WELL (feet): 35	SAMPLE PUMP FLOW RATE (mL per minute): ~200	TUBING MATERIAL CODE: HDPE	
FIELD DECONTAMINATION: Y (N)	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm	DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW-42	3	CG	40ml	HCL	–	–	8260	APP ~200

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

DEP-SOP-001/01
Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC VAB
WELL NO:	MW-0023	SAMPLE ID:	MW0023-0215-0-20150922
DATE:	9/22/15		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
2"	3/16	22.5 feet to 27.5 feet	5.71	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .13 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1637	1706	1.45

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP. (°C)	COND. (µmhos/cm or µS/cm)	DISSOLVED OXYGEN (circle mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1657	1.0	1.0	0.05	5.84	6.76	27.25	2550	0.23	4.12	clear	none	-20
1700	0.15	1.15	0.05	5.85	6.76	27.23	2551	0.21	6.34	"	"	-20
1703	0.15	1.30	0.05	5.84	6.77	27.22	2552	0.20	5.76	"	"	-19
1706	0.15	1.45	0.05	5.84	6.77	27.21	2554	0.18	3.87	"	"	-19

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURES:	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
David Dankel/AVS		1707	1710

PUMP OR TUBING DEPTH IN WELL (feet):	SAMPLE PUMP FLOW RATE (mL per minute):	TUBING MATERIAL CODE:
25	~200	HDPE

FIELD DECONTAMINATION: Y (N)
FIELD-FILTERED: Y N FILTER SIZE: ____ µm
Filtration Equipment Type: ____
DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION				
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE
MW23	3	CG	40ml	HCl	–	–	PZ60	APP ~200

REMARKS: 1707

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING/PURGING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); VT = Vacuum Trap; O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Drum and Bin Tracking Sheet

Project No: TL014020.0000.00004
Site Name: NASA - M505

Project Manager: Scott STARR
Project Location: BLD M505 KSC IND AREA

Pallet ID/ Bar Code	Drum No.	Drum Bar Code	% Full	Contents	Source Location (Well #, Boring #, etc.	Date Generated	Sampling Date	Storage Area
177813	1	198383	75%	ground water - MW Purge water IDW	MW's 1-59 (various loc's)	9/28-9/29	9/28-9/29	BLD M505 Behind POL
	2							
	3							
	4							

Content Codes:
Decon = decon water
Dev = development water
PW = purge water
S = soil

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 MPS **INSTRUMENT #** 16100864

PARAMETER: *[check only one]*

☐ TEMPERATURE ☑ CONDUCTIVITY ☐ SALINITY ☑ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☑ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A D.O.: 100% Standard D: Cond. 1,000 us/cm
Standard B pH: 7.00
Standard C pH: 4.00

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/09/28	1041	A	100%	100.2	0.2	Y	Init.	DJW
	1045	B	7.00	7.00	0.0			
	1049	C	4.00	4.00	0.0			
	1053	D	1,000	1,000	0.0			
	1705	A	100%	90.6	9.4	N	Cont	
	1708	B	7.00	7.06	0.8			
	1711	C	4.00	4.01	0.3			
	1714	D	1,000	993	0.7			
15/09/29	0907	A	100%	100.2	0.2	Y	Init	
	0907	D	7.00	7.00	0.0			
	0910	C	4.00	4.00	0.0			
	0914	D	1,000	1,000	0.0			
	1509	A	100%	97.4	2.6	N	Cont	
	1512	B	7.00	7.01	0.1			
	1515	C	4.00	4.04	1.0			
	1519	D	1,000	1001	0.1			

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) LaMotte 2020we **INSTRUMENT #** 768-1011

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☑ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0
Standard B 10.0
Standard C _____

DATE (yy/mm/dd)	TIME (hr:min)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/09/28	1057	A	0.0	0.0	0	Y	Init	DVW
	1058	B	10.0	9.92	1.8	Y	" "	
	1717	A	0.0	-0.08	—	N	Cont	
	1718	B	10.0	9.73	2.8	N	" "	
15/09/29	0917	A	0.0	0.0	0	Y	Init	
	0918	B	10.0	9.96		Y	"	
	1522	A	0.0	-0.03	—	N	Cont	
	1523	B	10.0	9.64	3.7	N	"	

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) YSI 556 **INSTRUMENT #** 07F100621

PARAMETER: *[check only one]*

☐ TEMPERATURE ☒ CONDUCTIVITY ☐ SALINITY ☒ pH ☐ ORP
☐ TURBIDITY ☐ RESIDUAL Cl ☒ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 4.01 Standard D 100% Amb Air NASA - MSOS 7/28-7/29
Standard B 7.00
Standard C 1000 us/cm

DATE (mm/dd/yy)	TIME (military)	STD (A, B, C)	STD VALUE	INSTRUMENT RESPONSE	% DEV	CALIBRATED (YES, NO)	TYPE (INIT, CONT)	SAMPLER INITIALS
15/09/28	1030	A	4.01	4.03	-	N	INIT	DJD
	1032	B	7.00	7.01	-	N	INIT	
	1034	C	1000	1001	-	N	INIT	
	1039	D	100%	99.7	-	N	INIT	
15/09/28	1740	A	4.01	4.04	-	N	FINAL	DJD
	1742	B	7.00	7.02	-	N	FINAL	
	1744	C	1000	1006	-	N	FINAL	
	1749	D	100%	99.2	-	N	FINAL	
15/09/29	0930	A	4.01	4.05	-	Yes	INIT	DJD
	0932	B	7.00	7.04	-	Yes	INIT	
	0934	C	1000	1012	-	Yes	INIT	
	0939	D	100%	98.7	-	NO	INIT	
15/09/29	1512	A	4.01	4.01	-	NO	FINAL	DJD
	1515	B	7.00	7.01	-	NO	FINAL	
	1517	C	1000	1003 ~~98.6~~	-	NO	FINAL	
	1521	D	100%	98.6	-	NO	FINAL	
		A	4.01				INIT	
		B	7.00				INIT	
		C	1000				INIT	
		D	100%				INIT	
		A	4.01				FINAL	
		B	7.00				FINAL	
		C	1000				FINAL	
		D	100%				FINAL	

DEP-SOP-001/01
FT 1000 General Field Testing and Measurement

Form FD 9000-8: FIELD INSTRUMENT CALIBRATION RECORDS

INSTRUMENT (MAKE/MODEL#) LAMOTTE 2020 WE **INSTRUMENT #** 3093-1213

PARAMETER: *[check only one]*

☐ TEMPERATURE ☐ CONDUCTIVITY ☐ SALINITY ☐ pH ☐ ORP
☒ TURBIDITY ☐ RESIDUAL Cl ☐ DO ☐ OTHER _____

STANDARDS: *[Specify the type(s) of standards used for calibration, the origin of the standards, the standard values, and the date the standards were prepared or purchased]*

Standard A 0.0 NA8A-4150 7/28-7/29
Standard B 10.0
Standard C _____

15/09/28	1028	A	0.0	0.0	-	ND	INIT	DDD
15/09/28	1029	B	10.0	10.1	-	ND	INIT	DDD
15/09/28	1738	A	0.0	0.0	-	ND	FINAL	DDD
15/09/28	1739	B	10.0	9.97	-	ND	FINAL	DDD
15/09/29	0927	A	0.0	0.0	-	ND	INIT	DDD
15/09/29	0928	B	10.0	10.06	-	ND	INIT	DDD
15/09/29	1509	A	0.0	0.0	-	ND	FINAL	DDD
15/09/29	1510	B	10.0	10.14	-	ND	FINAL	DDD
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	
		A	1.0				INIT	
		B	10.0				INIT	
		A	1.0				FINAL	
		B	10.0				FINAL	

ALS Environmental

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Phillips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011 PAGE 3 OF 3

SR#

CAS Contract

Project Name: NASA M505	Project Number: TO14020.0060
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@arcadis-us.com
Company/Address: ARCADIS 14025 Riveredge Dr. #600 TAMPA FL 33637	
Phone #: 813-394-9378	FAX #
Sampler's Signature	Sampler's Printed Name: DAVID DANKERT

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260 B VOC's	REMARKS/ ALTERNATE DESCRIPTION
M505-MW0021-025.0	-20150929	9/24/15	1329	GW	3	X	
M505-MW0057-025.0	-20150929	"	1405	"	3	X	
M505-MW0059-025.0	-20150929	"	1444	"	3	X	
M505-MW0049-027.5	-20150929	9/24/15	1048	GW	3	X	
TRIP BLANK		-	-	-	3	X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

___ V. Specialized Forms / Custom Report

Edata ___Yes ___No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm	Firm	Firm	Firm	Firm
Date/Time: 9/30/15 Fedex	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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SR#

CAS Contract

Project Name: NASA - MS05	Project Number: 7100820.0000
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@ARCADIS.COM
Company/Address: ARCADIS	
14025 Riverdale Dr. #600	
TAMPA FL 33637	
Phone #: 813-903-3100	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DANKERT

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

NUMBER OF CONTAINERS / 8260 B VOCs

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260 B VOCs	REMARKS/ ALTERNATE DESCRIPTION
MS05-MW0032-035.0	20150928	9/28/15	1648	GW	3	X	
MS05-MW0038-025.0	20150929	9/29/15	1020		3	X	
MS05-MW0020-038.0	20150929		1100		3	X	
MS05-MW0048-027.5	20150929		1146		3	X	
MS05-MW0018-036.0	20150929		1240		3	X	
MS05-MW0022-025.0	20150929		1328		3	X	
MS05-MW0037-025.0	20150929		1412		3	X	
MS05-MW0028-025.0	20150929		1454		3	X	
MS05-MW0025-025.0	20150929		1128		3	X	
MS05-MW0035-025.0	20150929		1013		3	X	
MS05-MW0030-025.0	20150929	9/29/15	1244	GW	3	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

___ V. Specialized Forms / Custom Report

Edata ___ Yes ___ No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm	Firm	Firm	Firm	Firm
Date/Time: 9/29/15 Friday	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR#

CAS Contract

Project Name: NASA M505	Project Number: T0114120.0000
Project Manager: SCOTT STARK	Email Address: SCOTT.STARK@ARCADIS-US.COM
Company/Address: ARCADIS 14025 Riveredge Dr #600 TAMPA FL 33637	
Phone #: 813-903-3100	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DRAKER

ANALYSIS REQUESTED *(Include Method Number and Container Preservative)*

PRESERVATIVE: 1

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260 & VOC's
M505-MW0013I-025.5-	20150928	9/28/15	1333	GW	3	X
M505-MW0039-032.5-	20150928		1420		3	X
M505-MW0044-027.5-	20150928		1504		3	X
M505-MW0041-025.0-	20150928		1545		3	X
M505-MW0042-035.0-	20150928		1624		3	X
M505-MW0023-025.0-	20150928		1707		3	X
M505-MW0055-025.0-	20150928		1325		3	X
M505-MW0053-010.0-	20150928		1406		3	X
M505-MW0052-010.0-	20150928		1449		3	X
M505-MW0051-025.0-	20150928	"	1533	"	3	X
M505-MW0033-025.0-	20150928	9/28/15	1613	GW	3	X

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

___ V. Specialized Forms / Custom Report

Edata ___Yes ___No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DRAKER	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm	Firm	Firm	Firm	Firm
Date/Time: 9/29/15 1400	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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Appendix C

KEDD Completion Tickets

Data Checker

Completion Ticket

On 12/30/2014 at 6:38 AM the following files were submitted to TtNUS

COMPLETION_LFRTA_M505_20141230.txt

LITHOLOGY_LFRTA_M505_20141230.txt

LOCATION_LFRTA_M505_20141230.txt

PROJECT_LFRTA_M505_20141230.txt

RESULT_LFRTA_M505_20141230.txt

SAMPLE_LFRTA_M505_20141230.txt

WATER_LFRTA_M505_20141230.txt

The following comment was provided with this submission:
November M505 sampling event

If you need to identify this session at a later date you may use the Ticket Key:

Repository20141230_660091050_kedd_LFRTA

You may print this page by clicking on the "Print This Page" button

Thank you for using the Data Checker, to upload more files click the "Upload Files" link in the menu.

Print this Page

DATA CHECKER

Completion Ticket

On 11/11/2015 at 1:04 PM the following files were submitted to TtNUS

COMPLETION_ARC_M505_201502.txt

LITHOLOGY_ARC_M505_201502.txt

LOCATION_ARC_M505_201502.txt

PROJECT_ARC_M505_201502.txt

RESULT_ARC_M505_20150502.txt

SAMPLE_ARC_M505_2015002.txt

WATER_ARC_M505_201502.txt

The following comment was provided with this submission:
Submitted by Tetra Tech on behalf of Scott Starr at Arcadis

If you need to identify this session at a later date you may use the Ticket Key:

Repository20151111_2137009919_kedd_TTNPT

You may print this page by clicking on the "Print This Page" button

Thank you for using the Data Checker, to upload more files click the "Upload Files" link in the menu.

Print this Page

DATA CHECKER

Completion Ticket

On 11/11/2015 at 1:06 PM the following files were submitted to TtNUS

COMPLETION_ARC_M505_201408.txt

LITHOLOGY_ARC_M505_201408.txt

LOCATION_ARC_M505_201408.txt

PROJECT_ARC_M505_201408.txt

RESULT_ARC_M505_201408.txt

SAMPLE_ARC_M505_201408.txt

WATER_ARC_M505_201408.txt

The following comment was provided with this submission:
Submitted by Tetra Tech on behalf of Scott Starr at Arcadis

If you need to identify this session at a later date you may use the Ticket Key:

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DATA CHECKER

Completion Ticket

On 11/11/2015 at 1:00 PM the following files were submitted to TtNUS

COMPLETION_ARC_M505_201505.txt

LITHOLOGY_ARC_M505_201505.txt

LOCATION_ARC_M505_201505.txt

PROJECT_ARC_M505_201505.txt

RESULT_ARC_M505_201505.txt

SAMPLE_ARC_M505_201505.txt

WATER_ARC_M505_201505.txt

The following comment was provided with this submission:
Submitted by Tetra Tech on behalf of Scott Star at Arcadis

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Appendix D

Laboratory Analytical Reports and Chain-of-Custody Forms

August 31, 2014 Service Request No:J1406262

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA M505

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory August 16, 2014
For your reference, these analyses have been assigned our service request number **J1406262.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0055-025.0-20140813 **Lab ID: J1406262-001**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	3844				uMHOS/c	120.1
pH, Field	7.20				pH Units	150.1
Temperature, Field	27.75				deg C	170.1
Turbidity, Field	6.12				NTU	180.1
Acetone	14	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	0.46	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	0.46	I	0.36	1.0	ug/L	8260B
Depth	7.24				Feet	Depth Field

CLIENT ID: M505-MW0052-010.0-20140813 **Lab ID: J1406262-002**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	364				uMHOS/c	120.1
pH, Field	5.73				pH Units	150.1
Temperature, Field	27.81				deg C	170.1
Turbidity, Field	31.3				NTU	180.1
Acetone	10	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	28		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.3		0.19	1.0	ug/L	8260B
Vinyl Chloride	3.1		0.36	1.0	ug/L	8260B
Depth	7.15				Feet	Depth Field

CLIENT ID: M505-MW0051-025.0-20140813 **Lab ID: J1406262-003**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	2772				uMHOS/c	120.1
pH, Field	7.40				pH Units	150.1
Temperature, Field	27.74				deg C	170.1
Turbidity, Field	8.46				NTU	180.1
1,1-Dichloroethene (1,1-DCE)	0.33	I	0.16	1.0	ug/L	8260B
Acetone	18	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	47		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.89	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	7.1		0.36	1.0	ug/L	8260B
Vinyl Chloride	24		0.36	1.0	ug/L	8260B
Depth	7.33				Feet	Depth Field

CLIENT ID: M505-MW0033-025.0-20140813 **Lab ID: J1406262-004**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	2718				uMHOS/c	120.1
pH, Field	6.98				pH Units	150.1
Temperature, Field	28.86				deg C	170.1
Turbidity, Field	11.8				NTU	180.1
Acetone	13	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	26		0.36	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0033-025.0-20140813	Lab ID: J1406262-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
trans-1,2-Dichloroethene	0.48	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.81	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	0.85	I	0.36	1.0	ug/L	8260B
Depth	8.10				Feet	Depth Field
Dissolved Oxygen, Field	1.3		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0032-035.0-20140813	Lab ID: J1406262-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3054				uMHOS/c	120.1
pH, Field	7.05				pH Units	150.1
Temperature, Field	31.09				deg C	170.1
Turbidity, Field	26.1				NTU	180.1
Acetone	11	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	67		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.31	I	0.19	1.0	ug/L	8260B
Vinyl Chloride	5.5		0.36	1.0	ug/L	8260B
Depth	8.78				Feet	Depth Field
Dissolved Oxygen, Field	4.0		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0025-025.0-20140813	Lab ID: J1406262-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3954				uMHOS/c	120.1
pH, Field	6.78				pH Units	150.1
Temperature, Field	27.84				deg C	170.1
Turbidity, Field	7.92				NTU	180.1
Acetone	6.1	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	150		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	4.2		0.19	1.0	ug/L	8260B
Depth	7.99				Feet	Depth Field

CLIENT ID: M505-MW0026-035.0-20140813	Lab ID: J1406262-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3712				uMHOS/c	120.1
pH, Field	6.91				pH Units	150.1
Temperature, Field	26.61				deg C	170.1
Turbidity, Field	3.02				NTU	180.1
Acetone	7.6	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	11		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.30	I	0.19	1.0	ug/L	8260B
Depth	9.23				Feet	Depth Field

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0049-027.5-20140813	Lab ID: J1406262-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1909				uMHOS/c	120.1
pH, Field	7.07				pH Units	150.1
Temperature, Field	28.26				deg C	170.1
Turbidity, Field	3.16				NTU	180.1
1,1-Dichloroethene (1,1-DCE)	0.40	I	0.16	1.0	ug/L	8260B
Acetone	6.8	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	240		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	2.9		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	4.7		0.36	1.0	ug/L	8260B
Vinyl Chloride	0.40	I	0.36	1.0	ug/L	8260B
Depth	8.23				Feet	Depth Field

CLIENT ID: M505-MW0019-025.0-20140813	Lab ID: J1406262-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3493				uMHOS/c	120.1
pH, Field	7.32				pH Units	150.1
Temperature, Field	28.84				deg C	170.1
Turbidity, Field	6.24				NTU	180.1
Acetone	5.7	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	23		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.3		0.19	1.0	ug/L	8260B
Depth	6.57				Feet	Depth Field
Dissolved Oxygen, Field	6.0		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0020-036.0-20140813	Lab ID: J1406262-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	4332				uMHOS/c	120.1
pH, Field	7.50				pH Units	150.1
Temperature, Field	28.62				deg C	170.1
Turbidity, Field	7.64				NTU	180.1
Acetone	13	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	4.8		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.29	I	0.19	1.0	ug/L	8260B
Depth	6.68				Feet	Depth Field
Dissolved Oxygen, Field	5.6		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0045-034.5-20140814	Lab ID: J1406262-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3655				uMHOS/c	120.1
pH, Field	6.94				pH Units	150.1
Temperature, Field	29.51				deg C	170.1
Turbidity, Field	11.8				NTU	180.1
Acetone	9.7	I	5.6	50	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0045-034.5-20140814	Lab ID: J1406262-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	69		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.31	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	2.3		0.19	1.0	ug/L	8260B
Depth	6.29				Feet	Depth Field

CLIENT ID: M505-MW0046-010.0-20140814	Lab ID: J1406262-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2907				uMHOS/c	120.1
pH, Field	4.26				pH Units	150.1
Temperature, Field	30.10				deg C	170.1
Turbidity, Field	25.5				NTU	180.1
Depth	6.20				Feet	Depth Field
Dissolved Oxygen, Field	1.1		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0038-025.0-20140814	Lab ID: J1406262-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3679				uMHOS/c	120.1
pH, Field	6.84				pH Units	150.1
Temperature, Field	29.53				deg C	170.1
Turbidity, Field	8.68				NTU	180.1
cis-1,2-Dichloroethene	16		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.58	I	0.19	1.0	ug/L	8260B
Depth	6.10				Feet	Depth Field

CLIENT ID: M505-MW0041-025.0-20140814	Lab ID: J1406262-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2294				uMHOS/c	120.1
pH, Field	6.91				pH Units	150.1
Temperature, Field	27.98				deg C	170.1
Turbidity, Field	36.1				NTU	180.1
Acetone	5.8	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	37		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.9		0.19	1.0	ug/L	8260B
Depth	6.20				Feet	Depth Field

CLIENT ID: M505-MW0042-035.0-20140814	Lab ID: J1406262-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2933				uMHOS/c	120.1
pH, Field	6.90				pH Units	150.1
Temperature, Field	28.51				deg C	170.1
Turbidity, Field	8.92				NTU	180.1
cis-1,2-Dichloroethene	58		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.9		0.19	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0042-035.0-20140814	Lab ID: J1406262-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Trichloroethene (TCE)	6.1		0.36	1.0	ug/L	8260B
Depth	6.25				Feet	Depth Field

CLIENT ID: M505-MW0048-027.5-20140814	Lab ID: J1406262-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3012				uMHOS/c	120.1
pH, Field	7.13				pH Units	150.1
Temperature, Field	30.15				deg C	170.1
Turbidity, Field	7.12				NTU	180.1
cis-1,2-Dichloroethene	12		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.59	I	0.19	1.0	ug/L	8260B
Depth	6.15				Feet	Depth Field
Dissolved Oxygen, Field	2.9		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0013-025.0-20140814	Lab ID: J1406262-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2629				uMHOS/c	120.1
pH, Field	7.32				pH Units	150.1
Temperature, Field	30.29				deg C	170.1
Turbidity, Field	9.12				NTU	180.1
cis-1,2-Dichloroethene	0.71	I	0.36	1.0	ug/L	8260B
Depth	6.45				Feet	Depth Field
Dissolved Oxygen, Field	6.1		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0039-032.5-20140814	Lab ID: J1406262-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1409				uMHOS/c	120.1
pH, Field	7.03				pH Units	150.1
Temperature, Field	27.18				deg C	170.1
Turbidity, Field	6.82				NTU	180.1
cis-1,2-Dichloroethene	30		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.66	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	4.8		0.36	1.0	ug/L	8260B
Depth	5.48				Feet	Depth Field
Dissolved Oxygen, Field	2.2		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0040-025.0-20140814	Lab ID: J1406262-019					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1556				uMHOS/c	120.1
pH, Field	6.99				pH Units	150.1
Temperature, Field	26.95				deg C	170.1
Turbidity, Field	9.70				NTU	180.1
Acetone	6.9	I	5.6	50	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0040-025.0-20140814	Lab ID: J1406262-019					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	12		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.36	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	2.3		0.36	1.0	ug/L	8260B
Depth	5.88				Feet	Depth Field

CLIENT ID: M505-MW0044-027.5-20140814	Lab ID: J1406262-020					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3247				uMHOS/c	120.1
pH, Field	7.15				pH Units	150.1
Temperature, Field	26.37				deg C	170.1
Turbidity, Field	7.22				NTU	180.1
Acetone	8.8	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	3.1		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.21	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.67	I	0.36	1.0	ug/L	8260B
Depth	5.24				Feet	Depth Field

CLIENT ID: M505-MW0023-025.0-20140815	Lab ID: J1406262-021					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3150				uMHOS/c	120.1
pH, Field	7.04				pH Units	150.1
Temperature, Field	26.97				deg C	170.1
Turbidity, Field	2.68				NTU	180.1
cis-1,2-Dichloroethene	0.99	I	0.36	1.0	ug/L	8260B
Depth	6.02				Feet	Depth Field
Dissolved Oxygen, Field	2.0		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0024-035.0-20140815	Lab ID: J1406262-022					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3116				uMHOS/c	120.1
pH, Field	7.52				pH Units	150.1
Temperature, Field	27.22				deg C	170.1
Turbidity, Field	4.22				NTU	180.1
Acetone	5.8	I	5.6	50	ug/L	8260B
Depth	7.52				Feet	Depth Field
Dissolved Oxygen, Field	6.2		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: M505-MW0035-025.0-20140815	Lab ID: J1406262-023					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2476				uMHOS/c	120.1
pH, Field	6.97				pH Units	150.1
Temperature, Field	26.20				deg C	170.1
Turbidity, Field	10.2				NTU	180.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0035-025.0-20140815	Lab ID: J1406262-023					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	140		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	12		0.36	1.0	ug/L	8260B
Depth	4.23				Feet	Depth Field

CLIENT ID: M505-MW0036-035.0-20140815	Lab ID: J1406262-024					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2859				uMHOS/c	120.1
pH, Field	7.29				pH Units	150.1
Temperature, Field	25.98				deg C	170.1
Turbidity, Field	9.42				NTU	180.1
Acetone	6.9	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	2.8		0.36	1.0	ug/L	8260B
Depth	3.87				Feet	Depth Field
Dissolved Oxygen, Field	1.2		1.0	1.0	mg/L	SM 4500-O

CLIENT ID: Trip Blank	Lab ID: J1406262-025					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Acetone	14	I	5.6	50	ug/L	8260B
Methylene Chloride	0.25	IV	0.21	5.0	ug/L	8260B

Client: Levine Fricke
Project: NASA M505/TL014020.0001
Sample Matrix: Water

Service Request:J1406262
Date Received:8/16/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Twenty-four water samples and one trip blank were received for analysis at ALS Environmental on 08/16/2014. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

Method 8260B: Method Blank JQ1406473-03 contained a low level of Methylene Chloride above the Method Detection Limit (MDL), but less than the Method Reporting Limit (MRL). Samples that exhibited this analyte in approximately the same concentration as the method blank are flagged with a qualifier to indicate the results are estimated values. The method blank results may indicate the potential for a false positive.

Method 8260B: The upper control criterion was exceeded for the one or more surrogates in several samples. No target analytes associated to the surrogates in question were detected in the associated field samples above the Method Reporting Limit (MRL). Samples with surrogate recoveries greater than 30% were reanalyzed to confirm a potential matrix effect. The quality of the sample data is not significantly affected and no further corrective action was appropriate.

Approved by _____ Date 8/31/2014

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	11/1/2014
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2011006	2/3/2015
North Carolina Department of Environment and Natural Resources	527	12/31/2014
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Virginia Environmental Accreditation Program	460191	12/14/2014

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1406262

Project: NASA M505/TL014020.0001

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1406262-001	M505-MW0055-025.0-20140813	8/13/2014	1112
J1406262-002	M505-MW0052-010.0-20140813	8/13/2014	1147
J1406262-003	M505-MW0051-025.0-20140813	8/13/2014	1223
J1406262-004	M505-MW0033-025.0-20140813	8/13/2014	1302
J1406262-005	M505-MW0032-035.0-20140813	8/13/2014	1333
J1406262-006	M505-MW0025-025.0-20140813	8/13/2014	1422
J1406262-007	M505-MW0026-035.0-20140813	8/13/2014	1457
J1406262-008	M505-MW0049-027.5-20140813	8/13/2014	1546
J1406262-009	M505-MW0019-025.0-20140813	8/13/2014	1827
J1406262-010	M505-MW0020-036.0-20140813	8/13/2014	1851
J1406262-011	M505-MW0045-034.5-20140814	8/13/2014	0917
J1406262-012	M505-MW0046-010.0-20140814	8/14/2014	0958
J1406262-013	M505-MW0038-025.0-20140814	8/14/2014	1039
J1406262-014	M505-MW0041-025.0-20140814	8/14/2014	1125
J1406262-015	M505-MW0042-035.0-20140814	8/14/2014	1159
J1406262-016	M505-MW0048-027.5-20140814	8/14/2014	1252
J1406262-017	M505-MW0013-025.0-20140814	8/14/2014	1422
J1406262-018	M505-MW0039-032.5-20140814	8/14/2014	1500
J1406262-019	M505-MW0040-025.0-20140814	8/14/2014	1521
J1406262-020	M505-MW0044-027.5-20140814	8/14/2014	1811
J1406262-021	M505-MW0023-025.0-20140815	8/15/2014	0847
J1406262-022	M505-MW0024-035.0-20140815	8/15/2014	0919
J1406262-023	M505-MW0035-025.0-20140815	8/15/2014	0957
J1406262-024	M505-MW0036-035.0-20140815	8/15/2014	1029
J1406262-025	Trip Blank	8/13/2014	0000

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 11:12
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0055-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 08:26	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 08:26	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 08:26	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 08:26	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 08:26	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 08:26	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 08:26	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 08:26	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 08:26	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 08:26	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 08:26	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 08:26	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 08:26	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 08:26	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 08:26	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 08:26	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 08:26	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 08:26	
Acetone	**14 I**	50	5.6	1	08/22/14 08:26	
Benzene	0.21 U	1.0	0.21	1	08/22/14 08:26	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 08:26	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 08:26	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 08:26	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 08:26	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 08:26	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 08:26	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 08:26	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 08:26	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 08:26	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 08:26	
cis-1,2-Dichloroethene	**0.46 I**	1.0	0.36	1	08/22/14 08:26	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 08:26	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 08:26	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 08:26	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 08:26	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 08:26	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 08:26	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 08:26	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 08:26	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 08:26	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 08:26	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 08:26	
Styrene	0.29 U	1.0	0.29	1	08/22/14 08:26	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 11:12
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0055-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 08:26	
Toluene	0.19 U	1.0	0.19	1	08/22/14 08:26	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/22/14 08:26	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 08:26	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 08:26	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 08:26	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 08:26	
Vinyl Chloride	**0.46 I**	1.0	0.36	1	08/22/14 08:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	129	72 - 121	08/22/14 08:26	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 08:26	
Dibromofluoromethane	126	86 - 112	08/22/14 08:26	*
Toluene-d8	95	88 - 115	08/22/14 08:26	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 11:47
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0052-010.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 08:50	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 08:50	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 08:50	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 08:50	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 08:50	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 08:50	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 08:50	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 08:50	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 08:50	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 08:50	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 08:50	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 08:50	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 08:50	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 08:50	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 08:50	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 08:50	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 08:50	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 08:50	
Acetone	**10 I**	50	5.6	1	08/22/14 08:50	
Benzene	0.21 U	1.0	0.21	1	08/22/14 08:50	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 08:50	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 08:50	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 08:50	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 08:50	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 08:50	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 08:50	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 08:50	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 08:50	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 08:50	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 08:50	
cis-1,2-Dichloroethene	**28**	1.0	0.36	1	08/22/14 08:50	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 08:50	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 08:50	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 08:50	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 08:50	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 08:50	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 08:50	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 08:50	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 08:50	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 08:50	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 08:50	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 08:50	
Styrene	0.29 U	1.0	0.29	1	08/22/14 08:50	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 11:47
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0052-010.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 08:50	
Toluene	0.19 U	1.0	0.19	1	08/22/14 08:50	
trans-1,2-Dichloroethene	**1.3**	1.0	0.19	1	08/22/14 08:50	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 08:50	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 08:50	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 08:50	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 08:50	
Vinyl Chloride	**3.1**	1.0	0.36	1	08/22/14 08:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	127	72 - 121	08/22/14 08:50	*
4-Bromofluorobenzene	91	86 - 113	08/22/14 08:50	
Dibromofluoromethane	122	86 - 112	08/22/14 08:50	*
Toluene-d8	94	88 - 115	08/22/14 08:50	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 12:23
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0051-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 09:15	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 09:15	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 09:15	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 09:15	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 09:15	
1,1-Dichloroethene (1,1-DCE)	**0.33 I**	1.0	0.16	1	08/22/14 09:15	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 09:15	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 09:15	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 09:15	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 09:15	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 09:15	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 09:15	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 09:15	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 09:15	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 09:15	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 09:15	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 09:15	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 09:15	
Acetone	**18 I**	50	5.6	1	08/22/14 09:15	
Benzene	0.21 U	1.0	0.21	1	08/22/14 09:15	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 09:15	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 09:15	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 09:15	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 09:15	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 09:15	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 09:15	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 09:15	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 09:15	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 09:15	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 09:15	
cis-1,2-Dichloroethene	**47**	1.0	0.36	1	08/22/14 09:15	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 09:15	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 09:15	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 09:15	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 09:15	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 09:15	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 09:15	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 09:15	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 09:15	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 09:15	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 09:15	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 09:15	
Styrene	0.29 U	1.0	0.29	1	08/22/14 09:15	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 12:23
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0051-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 09:15	
Toluene	0.19 U	1.0	0.19	1	08/22/14 09:15	
trans-1,2-Dichloroethene	**0.89 I**	1.0	0.19	1	08/22/14 09:15	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 09:15	
Trichloroethene (TCE)	**7.1**	1.0	0.36	1	08/22/14 09:15	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 09:15	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 09:15	
Vinyl Chloride	**24**	1.0	0.36	1	08/22/14 09:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	128	72 - 121	08/22/14 09:15	*
4-Bromofluorobenzene	88	86 - 113	08/22/14 09:15	
Dibromofluoromethane	124	86 - 112	08/22/14 09:15	*
Toluene-d8	96	88 - 115	08/22/14 09:15	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 13:02
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0033-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 09:39	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 09:39	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 09:39	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 09:39	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 09:39	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 09:39	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 09:39	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 09:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 09:39	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 09:39	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 09:39	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 09:39	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 09:39	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 09:39	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 09:39	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 09:39	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 09:39	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 09:39	
Acetone	**13 I**	50	5.6	1	08/22/14 09:39	
Benzene	0.21 U	1.0	0.21	1	08/22/14 09:39	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 09:39	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 09:39	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 09:39	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 09:39	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 09:39	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 09:39	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 09:39	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 09:39	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 09:39	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 09:39	
cis-1,2-Dichloroethene	**26**	1.0	0.36	1	08/22/14 09:39	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 09:39	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 09:39	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 09:39	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 09:39	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 09:39	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 09:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 09:39	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 09:39	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 09:39	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 09:39	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 09:39	
Styrene	0.29 U	1.0	0.29	1	08/22/14 09:39	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 13:02
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0033-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 09:39	
Toluene	0.19 U	1.0	0.19	1	08/22/14 09:39	
trans-1,2-Dichloroethene	**0.48 I**	1.0	0.19	1	08/22/14 09:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 09:39	
Trichloroethene (TCE)	**0.81 I**	1.0	0.36	1	08/22/14 09:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 09:39	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 09:39	
Vinyl Chloride	**0.85 I**	1.0	0.36	1	08/22/14 09:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	128	72 - 121	08/22/14 09:39	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 09:39	
Dibromofluoromethane	124	86 - 112	08/22/14 09:39	*
Toluene-d8	94	88 - 115	08/22/14 09:39	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 13:33
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0032-035.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 10:04	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 10:04	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 10:04	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 10:04	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 10:04	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 10:04	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 10:04	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 10:04	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 10:04	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 10:04	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 10:04	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 10:04	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 10:04	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 10:04	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 10:04	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 10:04	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 10:04	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 10:04	
Acetone	**11 I**	50	5.6	1	08/22/14 10:04	
Benzene	0.21 U	1.0	0.21	1	08/22/14 10:04	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 10:04	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 10:04	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 10:04	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 10:04	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 10:04	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 10:04	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 10:04	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 10:04	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 10:04	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 10:04	
cis-1,2-Dichloroethene	**67**	1.0	0.36	1	08/22/14 10:04	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 10:04	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 10:04	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 10:04	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 10:04	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 10:04	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 10:04	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 10:04	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 10:04	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 10:04	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 10:04	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 10:04	
Styrene	0.29 U	1.0	0.29	1	08/22/14 10:04	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 13:33
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0032-035.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 10:04	
Toluene	0.19 U	1.0	0.19	1	08/22/14 10:04	
trans-1,2-Dichloroethene	**0.31 I**	1.0	0.19	1	08/22/14 10:04	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 10:04	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 10:04	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 10:04	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 10:04	
Vinyl Chloride	**5.5**	1.0	0.36	1	08/22/14 10:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	127	72 - 121	08/22/14 10:04	*
4-Bromofluorobenzene	88	86 - 113	08/22/14 10:04	
Dibromofluoromethane	122	86 - 112	08/22/14 10:04	*
Toluene-d8	94	88 - 115	08/22/14 10:04	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 14:22
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0025-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 10:29	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 10:29	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 10:29	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 10:29	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 10:29	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 10:29	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 10:29	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 10:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 10:29	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 10:29	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 10:29	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 10:29	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 10:29	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 10:29	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 10:29	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 10:29	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 10:29	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 10:29	
Acetone	**6.1 I**	50	5.6	1	08/22/14 10:29	
Benzene	0.21 U	1.0	0.21	1	08/22/14 10:29	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 10:29	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 10:29	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 10:29	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 10:29	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 10:29	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 10:29	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 10:29	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 10:29	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 10:29	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 10:29	
cis-1,2-Dichloroethene	**150**	1.0	0.36	1	08/22/14 10:29	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 10:29	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 10:29	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 10:29	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 10:29	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 10:29	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 10:29	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 10:29	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 10:29	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 10:29	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 10:29	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 10:29	
Styrene	0.29 U	1.0	0.29	1	08/22/14 10:29	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 14:22
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0025-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 10:29	
Toluene	0.19 U	1.0	0.19	1	08/22/14 10:29	
trans-1,2-Dichloroethene	**4.2**	1.0	0.19	1	08/22/14 10:29	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 10:29	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 10:29	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 10:29	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 10:29	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 10:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	129	72 - 121	08/22/14 10:29	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 10:29	
Dibromofluoromethane	123	86 - 112	08/22/14 10:29	*
Toluene-d8	94	88 - 115	08/22/14 10:29	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 14:57
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0026-035.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 17:39	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 17:39	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 17:39	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 17:39	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 17:39	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 17:39	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 17:39	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 17:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 17:39	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 17:39	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 17:39	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 17:39	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 17:39	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 17:39	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 17:39	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 17:39	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 17:39	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 17:39	
Acetone	**7.6 I**	50	5.6	1	08/25/14 17:39	
Benzene	0.21 U	1.0	0.21	1	08/25/14 17:39	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 17:39	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 17:39	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 17:39	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 17:39	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 17:39	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 17:39	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 17:39	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 17:39	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 17:39	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 17:39	
cis-1,2-Dichloroethene	**11**	1.0	0.36	1	08/25/14 17:39	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 17:39	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 17:39	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 17:39	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 17:39	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 17:39	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 17:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 17:39	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 17:39	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 17:39	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 17:39	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 17:39	
Styrene	0.29 U	1.0	0.29	1	08/25/14 17:39	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 14:57
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0026-035.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 17:39	
Toluene	0.19 U	1.0	0.19	1	08/25/14 17:39	
trans-1,2-Dichloroethene	**0.30 I**	1.0	0.19	1	08/25/14 17:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 17:39	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 17:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 17:39	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 17:39	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 17:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	128	72 - 121	08/25/14 17:39	*
4-Bromofluorobenzene	91	86 - 113	08/25/14 17:39	
Dibromofluoromethane	123	86 - 112	08/25/14 17:39	*
Toluene-d8	94	88 - 115	08/25/14 17:39	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 15:46
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0049-027.5-20140813	**Units:**	ug/L
Lab Code:	J1406262-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 11:18	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 11:18	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 11:18	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 11:18	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 11:18	
1,1-Dichloroethene (1,1-DCE)	**0.40 I**	1.0	0.16	1	08/22/14 11:18	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 11:18	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 11:18	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 11:18	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 11:18	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 11:18	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 11:18	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 11:18	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 11:18	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 11:18	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 11:18	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 11:18	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 11:18	
Acetone	**6.8 I**	50	5.6	1	08/22/14 11:18	
Benzene	0.21 U	1.0	0.21	1	08/22/14 11:18	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 11:18	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 11:18	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 11:18	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 11:18	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 11:18	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 11:18	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 11:18	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 11:18	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 11:18	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 11:18	
cis-1,2-Dichloroethene	**240**	1.0	0.36	1	08/22/14 11:18	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 11:18	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 11:18	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 11:18	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 11:18	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 11:18	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 11:18	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 11:18	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 11:18	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 11:18	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 11:18	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 11:18	
Styrene	0.29 U	1.0	0.29	1	08/22/14 11:18	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 15:46
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0049-027.5-20140813	**Units:**	ug/L
Lab Code:	J1406262-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 11:18	
Toluene	0.19 U	1.0	0.19	1	08/22/14 11:18	
trans-1,2-Dichloroethene	**2.9**	1.0	0.19	1	08/22/14 11:18	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 11:18	
Trichloroethene (TCE)	**4.7**	1.0	0.36	1	08/22/14 11:18	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 11:18	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 11:18	
Vinyl Chloride	**0.40 I**	1.0	0.36	1	08/22/14 11:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	125	72 - 121	08/22/14 11:18	*
4-Bromofluorobenzene	89	86 - 113	08/22/14 11:18	
Dibromofluoromethane	122	86 - 112	08/22/14 11:18	*
Toluene-d8	97	88 - 115	08/22/14 11:18	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 18:27
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0019-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 18:04	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 18:04	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 18:04	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 18:04	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 18:04	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 18:04	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 18:04	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 18:04	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 18:04	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 18:04	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 18:04	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 18:04	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 18:04	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 18:04	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:04	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 18:04	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 18:04	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 18:04	
Acetone	**5.7 I**	50	5.6	1	08/25/14 18:04	
Benzene	0.21 U	1.0	0.21	1	08/25/14 18:04	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 18:04	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 18:04	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 18:04	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 18:04	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 18:04	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 18:04	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:04	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 18:04	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 18:04	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 18:04	
cis-1,2-Dichloroethene	**23**	1.0	0.36	1	08/25/14 18:04	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 18:04	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 18:04	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 18:04	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 18:04	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 18:04	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 18:04	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 18:04	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 18:04	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 18:04	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 18:04	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 18:04	
Styrene	0.29 U	1.0	0.29	1	08/25/14 18:04	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 18:27
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0019-025.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 18:04	
Toluene	0.19 U	1.0	0.19	1	08/25/14 18:04	
trans-1,2-Dichloroethene	**1.3**	1.0	0.19	1	08/25/14 18:04	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 18:04	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 18:04	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 18:04	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 18:04	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 18:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	130	72 - 121	08/25/14 18:04	*
4-Bromofluorobenzene	89	86 - 113	08/25/14 18:04	
Dibromofluoromethane	122	86 - 112	08/25/14 18:04	*
Toluene-d8	94	88 - 115	08/25/14 18:04	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 18:51
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0020-036.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 18:28	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 18:28	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 18:28	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 18:28	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 18:28	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 18:28	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 18:28	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 18:28	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 18:28	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 18:28	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 18:28	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 18:28	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 18:28	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 18:28	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:28	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 18:28	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 18:28	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 18:28	
Acetone	**13 I**	50	5.6	1	08/25/14 18:28	
Benzene	0.21 U	1.0	0.21	1	08/25/14 18:28	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 18:28	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 18:28	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 18:28	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 18:28	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 18:28	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 18:28	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:28	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 18:28	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 18:28	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 18:28	
cis-1,2-Dichloroethene	**4.8**	1.0	0.36	1	08/25/14 18:28	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 18:28	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 18:28	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 18:28	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 18:28	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 18:28	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 18:28	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 18:28	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 18:28	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 18:28	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 18:28	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 18:28	
Styrene	0.29 U	1.0	0.29	1	08/25/14 18:28	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 18:51
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0020-036.0-20140813	**Units:**	ug/L
Lab Code:	J1406262-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 18:28	
Toluene	0.19 U	1.0	0.19	1	08/25/14 18:28	
trans-1,2-Dichloroethene	**0.29 I**	1.0	0.19	1	08/25/14 18:28	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 18:28	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 18:28	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 18:28	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 18:28	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 18:28	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	131	72 - 121	08/25/14 18:28	*
4-Bromofluorobenzene	90	86 - 113	08/25/14 18:28	
Dibromofluoromethane	126	86 - 112	08/25/14 18:28	*
Toluene-d8	94	88 - 115	08/25/14 18:28	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 09:17
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0045-034.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 19:26	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 19:26	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 19:26	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 19:26	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 19:26	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 19:26	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 19:26	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 19:26	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 19:26	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 19:26	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 19:26	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 19:26	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 19:26	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 19:26	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 19:26	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 19:26	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 19:26	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 19:26	
Acetone	**9.7 I**	50	5.6	1	08/22/14 19:26	
Benzene	0.21 U	1.0	0.21	1	08/22/14 19:26	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 19:26	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 19:26	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 19:26	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 19:26	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 19:26	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 19:26	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 19:26	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 19:26	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 19:26	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 19:26	
cis-1,2-Dichloroethene	**69**	1.0	0.36	1	08/22/14 19:26	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 19:26	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 19:26	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 19:26	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 19:26	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 19:26	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 19:26	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 19:26	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 19:26	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 19:26	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 19:26	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 19:26	
Styrene	0.29 U	1.0	0.29	1	08/22/14 19:26	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 09:17
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0045-034.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.31 I**	1.0	0.22	1	08/22/14 19:26	
Toluene	0.19 U	1.0	0.19	1	08/22/14 19:26	
trans-1,2-Dichloroethene	**2.3**	1.0	0.19	1	08/22/14 19:26	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 19:26	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 19:26	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 19:26	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 19:26	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 19:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	129	72 - 121	08/22/14 19:26	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 19:26	
Dibromofluoromethane	123	86 - 112	08/22/14 19:26	*
Toluene-d8	95	88 - 115	08/22/14 19:26	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 09:58
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0046-010.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 19:51	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 19:51	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 19:51	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 19:51	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 19:51	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 19:51	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 19:51	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 19:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 19:51	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 19:51	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 19:51	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 19:51	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 19:51	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 19:51	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 19:51	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 19:51	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 19:51	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 19:51	
Acetone	5.6 U	50	5.6	1	08/22/14 19:51	
Benzene	0.21 U	1.0	0.21	1	08/22/14 19:51	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 19:51	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 19:51	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 19:51	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 19:51	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 19:51	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 19:51	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 19:51	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 19:51	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 19:51	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 19:51	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/22/14 19:51	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 19:51	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 19:51	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 19:51	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 19:51	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 19:51	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 19:51	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 19:51	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 19:51	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 19:51	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 19:51	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 19:51	
Styrene	0.29 U	1.0	0.29	1	08/22/14 19:51	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 09:58
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0046-010.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 19:51	
Toluene	0.19 U	1.0	0.19	1	08/22/14 19:51	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/22/14 19:51	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 19:51	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 19:51	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 19:51	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 19:51	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 19:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	129	72 - 121	08/22/14 19:51	*
4-Bromofluorobenzene	92	86 - 113	08/22/14 19:51	
Dibromofluoromethane	123	86 - 112	08/22/14 19:51	*
Toluene-d8	95	88 - 115	08/22/14 19:51	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 10:39
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0038-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 18:53	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 18:53	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 18:53	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 18:53	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 18:53	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 18:53	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 18:53	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 18:53	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 18:53	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 18:53	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 18:53	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 18:53	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 18:53	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 18:53	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:53	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 18:53	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 18:53	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 18:53	
Acetone	5.6 U	50	5.6	1	08/25/14 18:53	
Benzene	0.21 U	1.0	0.21	1	08/25/14 18:53	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 18:53	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 18:53	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 18:53	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 18:53	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 18:53	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 18:53	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 18:53	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 18:53	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 18:53	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 18:53	
cis-1,2-Dichloroethene	**16**	1.0	0.36	1	08/25/14 18:53	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 18:53	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 18:53	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 18:53	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 18:53	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 18:53	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 18:53	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 18:53	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 18:53	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 18:53	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 18:53	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 18:53	
Styrene	0.29 U	1.0	0.29	1	08/25/14 18:53	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 10:39
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0038-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 18:53	
Toluene	0.19 U	1.0	0.19	1	08/25/14 18:53	
trans-1,2-Dichloroethene	**0.58 I**	1.0	0.19	1	08/25/14 18:53	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 18:53	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 18:53	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 18:53	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 18:53	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 18:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	135	72 - 121	08/25/14 18:53	*
4-Bromofluorobenzene	88	86 - 113	08/25/14 18:53	
Dibromofluoromethane	126	86 - 112	08/25/14 18:53	*
Toluene-d8	92	88 - 115	08/25/14 18:53	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 11:25
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0041-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 20:40	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 20:40	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 20:40	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 20:40	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 20:40	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 20:40	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 20:40	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 20:40	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 20:40	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 20:40	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 20:40	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 20:40	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 20:40	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 20:40	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 20:40	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 20:40	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 20:40	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 20:40	
Acetone	**5.8 I**	50	5.6	1	08/22/14 20:40	
Benzene	0.21 U	1.0	0.21	1	08/22/14 20:40	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 20:40	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 20:40	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 20:40	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 20:40	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 20:40	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 20:40	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 20:40	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 20:40	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 20:40	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 20:40	
cis-1,2-Dichloroethene	**37**	1.0	0.36	1	08/22/14 20:40	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 20:40	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 20:40	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 20:40	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 20:40	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 20:40	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 20:40	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 20:40	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 20:40	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 20:40	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 20:40	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 20:40	
Styrene	0.29 U	1.0	0.29	1	08/22/14 20:40	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 11:25
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0041-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 20:40	
Toluene	0.19 U	1.0	0.19	1	08/22/14 20:40	
trans-1,2-Dichloroethene	**1.9**	1.0	0.19	1	08/22/14 20:40	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 20:40	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 20:40	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 20:40	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 20:40	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 20:40	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	130	72 - 121	08/22/14 20:40	*
4-Bromofluorobenzene	87	86 - 113	08/22/14 20:40	
Dibromofluoromethane	124	86 - 112	08/22/14 20:40	*
Toluene-d8	95	88 - 115	08/22/14 20:40	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 11:59
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0042-035.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 21:04	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 21:04	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 21:04	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 21:04	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 21:04	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 21:04	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 21:04	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 21:04	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 21:04	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 21:04	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 21:04	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 21:04	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 21:04	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 21:04	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 21:04	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 21:04	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 21:04	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 21:04	
Acetone	5.6 U	50	5.6	1	08/22/14 21:04	
Benzene	0.21 U	1.0	0.21	1	08/22/14 21:04	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 21:04	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 21:04	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 21:04	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 21:04	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 21:04	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 21:04	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 21:04	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 21:04	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 21:04	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 21:04	
cis-1,2-Dichloroethene	**58**	1.0	0.36	1	08/22/14 21:04	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 21:04	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 21:04	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 21:04	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 21:04	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 21:04	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 21:04	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 21:04	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 21:04	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 21:04	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 21:04	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 21:04	
Styrene	0.29 U	1.0	0.29	1	08/22/14 21:04	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 11:59
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0042-035.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 21:04	
Toluene	0.19 U	1.0	0.19	1	08/22/14 21:04	
trans-1,2-Dichloroethene	**1.9**	1.0	0.19	1	08/22/14 21:04	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 21:04	
Trichloroethene (TCE)	**6.1**	1.0	0.36	1	08/22/14 21:04	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 21:04	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 21:04	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 21:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	128	72 - 121	08/22/14 21:04	*
4-Bromofluorobenzene	91	86 - 113	08/22/14 21:04	
Dibromofluoromethane	125	86 - 112	08/22/14 21:04	*
Toluene-d8	95	88 - 115	08/22/14 21:04	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 12:52
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0048-027.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 21:29	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 21:29	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 21:29	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 21:29	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 21:29	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 21:29	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 21:29	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 21:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 21:29	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 21:29	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 21:29	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 21:29	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 21:29	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 21:29	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 21:29	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 21:29	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 21:29	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 21:29	
Acetone	5.6 U	50	5.6	1	08/22/14 21:29	
Benzene	0.21 U	1.0	0.21	1	08/22/14 21:29	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 21:29	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 21:29	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 21:29	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 21:29	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 21:29	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 21:29	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 21:29	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 21:29	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 21:29	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 21:29	
cis-1,2-Dichloroethene	**12**	1.0	0.36	1	08/22/14 21:29	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 21:29	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 21:29	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 21:29	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 21:29	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 21:29	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 21:29	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 21:29	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 21:29	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 21:29	
Methylene Chloride	0.21 U	5.0	0.21	1	08/22/14 21:29	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 21:29	
Styrene	0.29 U	1.0	0.29	1	08/22/14 21:29	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 12:52
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0048-027.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 21:29	
Toluene	0.19 U	1.0	0.19	1	08/22/14 21:29	
trans-1,2-Dichloroethene	**0.59 I**	1.0	0.19	1	08/22/14 21:29	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 21:29	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 21:29	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 21:29	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 21:29	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 21:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	130	72 - 121	08/22/14 21:29	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 21:29	
Dibromofluoromethane	124	86 - 112	08/22/14 21:29	*
Toluene-d8	94	88 - 115	08/22/14 21:29	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 14:22
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0013-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 19:17	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 19:17	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 19:17	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 19:17	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 19:17	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 19:17	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 19:17	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 19:17	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 19:17	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 19:17	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 19:17	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 19:17	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 19:17	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 19:17	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 19:17	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 19:17	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 19:17	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 19:17	
Acetone	5.6 U	50	5.6	1	08/25/14 19:17	
Benzene	0.21 U	1.0	0.21	1	08/25/14 19:17	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 19:17	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 19:17	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 19:17	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 19:17	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 19:17	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 19:17	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 19:17	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 19:17	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 19:17	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 19:17	
cis-1,2-Dichloroethene	**0.71 I**	1.0	0.36	1	08/25/14 19:17	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 19:17	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 19:17	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 19:17	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 19:17	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 19:17	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 19:17	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 19:17	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 19:17	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 19:17	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 19:17	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 19:17	
Styrene	0.29 U	1.0	0.29	1	08/25/14 19:17	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 14:22
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0013-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 19:17	
Toluene	0.19 U	1.0	0.19	1	08/25/14 19:17	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/25/14 19:17	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 19:17	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 19:17	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 19:17	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 19:17	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 19:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	131	72 - 121	08/25/14 19:17	*
4-Bromofluorobenzene	90	86 - 113	08/25/14 19:17	
Dibromofluoromethane	127	86 - 112	08/25/14 19:17	*
Toluene-d8	93	88 - 115	08/25/14 19:17	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 15:00
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0039-032.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 19:42	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 19:42	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 19:42	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 19:42	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 19:42	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 19:42	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 19:42	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 19:42	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 19:42	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 19:42	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 19:42	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 19:42	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 19:42	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 19:42	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 19:42	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 19:42	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 19:42	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 19:42	
Acetone	5.6 U	50	5.6	1	08/25/14 19:42	
Benzene	0.21 U	1.0	0.21	1	08/25/14 19:42	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 19:42	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 19:42	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 19:42	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 19:42	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 19:42	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 19:42	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 19:42	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 19:42	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 19:42	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 19:42	
cis-1,2-Dichloroethene	**30**	1.0	0.36	1	08/25/14 19:42	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 19:42	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 19:42	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 19:42	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 19:42	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 19:42	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 19:42	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 19:42	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 19:42	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 19:42	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 19:42	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 19:42	
Styrene	0.29 U	1.0	0.29	1	08/25/14 19:42	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 15:00
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0039-032.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 19:42	
Toluene	0.19 U	1.0	0.19	1	08/25/14 19:42	
trans-1,2-Dichloroethene	**0.66 I**	1.0	0.19	1	08/25/14 19:42	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 19:42	
Trichloroethene (TCE)	**4.8**	1.0	0.36	1	08/25/14 19:42	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 19:42	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 19:42	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 19:42	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	131	72 - 121	08/25/14 19:42	*
4-Bromofluorobenzene	89	86 - 113	08/25/14 19:42	
Dibromofluoromethane	126	86 - 112	08/25/14 19:42	*
Toluene-d8	96	88 - 115	08/25/14 19:42	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 15:21
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0040-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 20:07	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 20:07	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 20:07	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 20:07	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 20:07	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 20:07	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 20:07	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 20:07	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 20:07	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 20:07	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 20:07	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 20:07	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 20:07	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 20:07	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 20:07	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 20:07	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 20:07	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 20:07	
Acetone	**6.9 I**	50	5.6	1	08/25/14 20:07	
Benzene	0.21 U	1.0	0.21	1	08/25/14 20:07	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 20:07	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 20:07	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 20:07	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 20:07	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 20:07	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 20:07	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 20:07	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 20:07	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 20:07	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 20:07	
cis-1,2-Dichloroethene	**12**	1.0	0.36	1	08/25/14 20:07	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 20:07	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 20:07	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 20:07	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 20:07	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 20:07	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 20:07	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 20:07	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 20:07	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 20:07	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 20:07	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 20:07	
Styrene	0.29 U	1.0	0.29	1	08/25/14 20:07	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 15:21
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0040-025.0-20140814	**Units:**	ug/L
Lab Code:	J1406262-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 20:07	
Toluene	0.19 U	1.0	0.19	1	08/25/14 20:07	
trans-1,2-Dichloroethene	**0.36 I**	1.0	0.19	1	08/25/14 20:07	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 20:07	
Trichloroethene (TCE)	**2.3**	1.0	0.36	1	08/25/14 20:07	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 20:07	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 20:07	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 20:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	133	72 - 121	08/25/14 20:07	*
4-Bromofluorobenzene	92	86 - 113	08/25/14 20:07	
Dibromofluoromethane	129	86 - 112	08/25/14 20:07	*
Toluene-d8	93	88 - 115	08/25/14 20:07	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 18:11
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0044-027.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 20:31	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 20:31	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 20:31	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 20:31	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 20:31	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 20:31	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 20:31	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 20:31	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 20:31	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 20:31	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 20:31	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 20:31	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 20:31	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 20:31	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 20:31	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 20:31	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 20:31	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 20:31	
Acetone	**8.8 I**	50	5.6	1	08/25/14 20:31	
Benzene	0.21 U	1.0	0.21	1	08/25/14 20:31	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 20:31	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 20:31	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 20:31	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 20:31	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 20:31	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 20:31	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 20:31	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 20:31	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 20:31	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 20:31	
cis-1,2-Dichloroethene	**3.1**	1.0	0.36	1	08/25/14 20:31	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 20:31	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 20:31	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 20:31	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 20:31	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 20:31	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 20:31	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 20:31	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 20:31	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 20:31	
Methylene Chloride	0.21 U	5.0	0.21	1	08/25/14 20:31	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 20:31	
Styrene	0.29 U	1.0	0.29	1	08/25/14 20:31	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/14/14 18:11
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0044-027.5-20140814	**Units:**	ug/L
Lab Code:	J1406262-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 20:31	
Toluene	0.19 U	1.0	0.19	1	08/25/14 20:31	
trans-1,2-Dichloroethene	**0.21 I**	1.0	0.19	1	08/25/14 20:31	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 20:31	
Trichloroethene (TCE)	**0.67 I**	1.0	0.36	1	08/25/14 20:31	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 20:31	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 20:31	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 20:31	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	136	72 - 121	08/25/14 20:31	*
4-Bromofluorobenzene	89	86 - 113	08/25/14 20:31	
Dibromofluoromethane	128	86 - 112	08/25/14 20:31	*
Toluene-d8	91	88 - 115	08/25/14 20:31	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 08:47
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0023-025.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/23/14 06:09	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/23/14 06:09	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/23/14 06:09	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/23/14 06:09	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/23/14 06:09	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/23/14 06:09	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/23/14 06:09	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/23/14 06:09	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/23/14 06:09	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/23/14 06:09	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/23/14 06:09	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/23/14 06:09	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/23/14 06:09	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/23/14 06:09	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:09	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/23/14 06:09	
2-Hexanone	2.2 U	25	2.2	1	08/23/14 06:09	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/23/14 06:09	
Acetone	5.6 U	50	5.6	1	08/23/14 06:09	
Benzene	0.21 U	1.0	0.21	1	08/23/14 06:09	
Bromochloromethane	0.27 U	5.0	0.27	1	08/23/14 06:09	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/23/14 06:09	
Bromoform	0.42 U	2.0	0.42	1	08/23/14 06:09	
Bromomethane	0.23 U	5.0	0.23	1	08/23/14 06:09	
Carbon Disulfide	2.4 U	10	2.4	1	08/23/14 06:09	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/23/14 06:09	
Chlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:09	
Chloroethane	0.52 U	5.0	0.52	1	08/23/14 06:09	
Chloroform	0.35 U	1.0	0.35	1	08/23/14 06:09	
Chloromethane	0.36 U	1.0	0.36	1	08/23/14 06:09	
cis-1,2-Dichloroethene	**0.99 I**	1.0	0.36	1	08/23/14 06:09	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/23/14 06:09	
Cyclohexane	0.24 U	10	0.24	1	08/23/14 06:09	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/23/14 06:09	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/23/14 06:09	
Ethylbenzene	0.21 U	1.0	0.21	1	08/23/14 06:09	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/23/14 06:09	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/23/14 06:09	
Methyl Acetate	0.84 U	10	0.84	1	08/23/14 06:09	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/23/14 06:09	
Methylene Chloride	0.21 U	5.0	0.21	1	08/23/14 06:09	
o-Xylene	0.14 U	1.0	0.14	1	08/23/14 06:09	
Styrene	0.29 U	1.0	0.29	1	08/23/14 06:09	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 08:47
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0023-025.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/23/14 06:09	
Toluene	0.19 U	1.0	0.19	1	08/23/14 06:09	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/23/14 06:09	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/23/14 06:09	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/23/14 06:09	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/23/14 06:09	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/23/14 06:09	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/23/14 06:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	125	72 - 121	08/23/14 06:09	*
4-Bromofluorobenzene	90	86 - 113	08/23/14 06:09	
Dibromofluoromethane	119	86 - 112	08/23/14 06:09	*
Toluene-d8	94	88 - 115	08/23/14 06:09	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 09:19
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0024-035.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/23/14 06:33	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/23/14 06:33	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/23/14 06:33	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/23/14 06:33	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/23/14 06:33	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/23/14 06:33	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/23/14 06:33	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/23/14 06:33	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/23/14 06:33	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/23/14 06:33	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/23/14 06:33	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/23/14 06:33	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/23/14 06:33	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/23/14 06:33	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:33	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/23/14 06:33	
2-Hexanone	2.2 U	25	2.2	1	08/23/14 06:33	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/23/14 06:33	
Acetone	**5.8 I**	50	5.6	1	08/23/14 06:33	
Benzene	0.21 U	1.0	0.21	1	08/23/14 06:33	
Bromochloromethane	0.27 U	5.0	0.27	1	08/23/14 06:33	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/23/14 06:33	
Bromoform	0.42 U	2.0	0.42	1	08/23/14 06:33	
Bromomethane	0.23 U	5.0	0.23	1	08/23/14 06:33	
Carbon Disulfide	2.4 U	10	2.4	1	08/23/14 06:33	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/23/14 06:33	
Chlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:33	
Chloroethane	0.52 U	5.0	0.52	1	08/23/14 06:33	
Chloroform	0.35 U	1.0	0.35	1	08/23/14 06:33	
Chloromethane	0.36 U	1.0	0.36	1	08/23/14 06:33	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/23/14 06:33	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/23/14 06:33	
Cyclohexane	0.24 U	10	0.24	1	08/23/14 06:33	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/23/14 06:33	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/23/14 06:33	
Ethylbenzene	0.21 U	1.0	0.21	1	08/23/14 06:33	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/23/14 06:33	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/23/14 06:33	
Methyl Acetate	0.84 U	10	0.84	1	08/23/14 06:33	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/23/14 06:33	
Methylene Chloride	0.21 U	5.0	0.21	1	08/23/14 06:33	
o-Xylene	0.14 U	1.0	0.14	1	08/23/14 06:33	
Styrene	0.29 U	1.0	0.29	1	08/23/14 06:33	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 09:19
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0024-035.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/23/14 06:33	
Toluene	0.19 U	1.0	0.19	1	08/23/14 06:33	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/23/14 06:33	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/23/14 06:33	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/23/14 06:33	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/23/14 06:33	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/23/14 06:33	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/23/14 06:33	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	128	72 - 121	08/23/14 06:33	*
4-Bromofluorobenzene	91	86 - 113	08/23/14 06:33	
Dibromofluoromethane	122	86 - 112	08/23/14 06:33	*
Toluene-d8	95	88 - 115	08/23/14 06:33	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 09:57
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0035-025.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/23/14 06:58	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/23/14 06:58	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/23/14 06:58	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/23/14 06:58	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/23/14 06:58	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/23/14 06:58	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/23/14 06:58	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/23/14 06:58	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/23/14 06:58	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/23/14 06:58	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/23/14 06:58	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/23/14 06:58	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/23/14 06:58	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/23/14 06:58	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:58	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/23/14 06:58	
2-Hexanone	2.2 U	25	2.2	1	08/23/14 06:58	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/23/14 06:58	
Acetone	5.6 U	50	5.6	1	08/23/14 06:58	
Benzene	0.21 U	1.0	0.21	1	08/23/14 06:58	
Bromochloromethane	0.27 U	5.0	0.27	1	08/23/14 06:58	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/23/14 06:58	
Bromoform	0.42 U	2.0	0.42	1	08/23/14 06:58	
Bromomethane	0.23 U	5.0	0.23	1	08/23/14 06:58	
Carbon Disulfide	2.4 U	10	2.4	1	08/23/14 06:58	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/23/14 06:58	
Chlorobenzene	0.16 U	1.0	0.16	1	08/23/14 06:58	
Chloroethane	0.52 U	5.0	0.52	1	08/23/14 06:58	
Chloroform	0.35 U	1.0	0.35	1	08/23/14 06:58	
Chloromethane	0.36 U	1.0	0.36	1	08/23/14 06:58	
cis-1,2-Dichloroethene	**140**	1.0	0.36	1	08/23/14 06:58	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/23/14 06:58	
Cyclohexane	0.24 U	10	0.24	1	08/23/14 06:58	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/23/14 06:58	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/23/14 06:58	
Ethylbenzene	0.21 U	1.0	0.21	1	08/23/14 06:58	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/23/14 06:58	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/23/14 06:58	
Methyl Acetate	0.84 U	10	0.84	1	08/23/14 06:58	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/23/14 06:58	
Methylene Chloride	0.21 U	5.0	0.21	1	08/23/14 06:58	
o-Xylene	0.14 U	1.0	0.14	1	08/23/14 06:58	
Styrene	0.29 U	1.0	0.29	1	08/23/14 06:58	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 09:57
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0035-025.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/23/14 06:58	
Toluene	0.19 U	1.0	0.19	1	08/23/14 06:58	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	08/23/14 06:58	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/23/14 06:58	
Trichloroethene (TCE)	**12**	1.0	0.36	1	08/23/14 06:58	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/23/14 06:58	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/23/14 06:58	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/23/14 06:58	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	125	72 - 121	08/23/14 06:58	*
4-Bromofluorobenzene	92	86 - 113	08/23/14 06:58	
Dibromofluoromethane	120	86 - 112	08/23/14 06:58	*
Toluene-d8	96	88 - 115	08/23/14 06:58	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 10:29
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0036-035.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/23/14 07:23	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/23/14 07:23	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/23/14 07:23	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/23/14 07:23	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/23/14 07:23	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/23/14 07:23	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/23/14 07:23	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/23/14 07:23	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/23/14 07:23	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/23/14 07:23	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/23/14 07:23	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/23/14 07:23	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/23/14 07:23	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/23/14 07:23	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/23/14 07:23	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/23/14 07:23	
2-Hexanone	2.2 U	25	2.2	1	08/23/14 07:23	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/23/14 07:23	
Acetone	**6.9 I**	50	5.6	1	08/23/14 07:23	
Benzene	0.21 U	1.0	0.21	1	08/23/14 07:23	
Bromochloromethane	0.27 U	5.0	0.27	1	08/23/14 07:23	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/23/14 07:23	
Bromoform	0.42 U	2.0	0.42	1	08/23/14 07:23	
Bromomethane	0.23 U	5.0	0.23	1	08/23/14 07:23	
Carbon Disulfide	2.4 U	10	2.4	1	08/23/14 07:23	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/23/14 07:23	
Chlorobenzene	0.16 U	1.0	0.16	1	08/23/14 07:23	
Chloroethane	0.52 U	5.0	0.52	1	08/23/14 07:23	
Chloroform	0.35 U	1.0	0.35	1	08/23/14 07:23	
Chloromethane	0.36 U	1.0	0.36	1	08/23/14 07:23	
cis-1,2-Dichloroethene	**2.8**	1.0	0.36	1	08/23/14 07:23	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/23/14 07:23	
Cyclohexane	0.24 U	10	0.24	1	08/23/14 07:23	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/23/14 07:23	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/23/14 07:23	
Ethylbenzene	0.21 U	1.0	0.21	1	08/23/14 07:23	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/23/14 07:23	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/23/14 07:23	
Methyl Acetate	0.84 U	10	0.84	1	08/23/14 07:23	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/23/14 07:23	
Methylene Chloride	0.21 U	5.0	0.21	1	08/23/14 07:23	
o-Xylene	0.14 U	1.0	0.14	1	08/23/14 07:23	
Styrene	0.29 U	1.0	0.29	1	08/23/14 07:23	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/15/14 10:29
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	M505-MW0036-035.0-20140815	**Units:**	ug/L
Lab Code:	J1406262-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/23/14 07:23	
Toluene	0.19 U	1.0	0.19	1	08/23/14 07:23	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/23/14 07:23	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/23/14 07:23	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/23/14 07:23	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/23/14 07:23	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/23/14 07:23	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/23/14 07:23	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	129	72 - 121	08/23/14 07:23	*
4-Bromofluorobenzene	91	86 - 113	08/23/14 07:23	
Dibromofluoromethane	119	86 - 112	08/23/14 07:23	*
Toluene-d8	95	88 - 115	08/23/14 07:23	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 00:00
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1406262-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 23:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 23:57	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 23:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 23:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 23:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 23:57	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 23:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 23:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 23:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 23:57	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 23:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 23:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 23:57	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 23:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 23:57	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 23:57	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 23:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 23:57	
Acetone	**14 I**	50	5.6	1	08/22/14 23:57	
Benzene	0.21 U	1.0	0.21	1	08/22/14 23:57	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 23:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 23:57	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 23:57	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 23:57	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 23:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 23:57	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 23:57	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 23:57	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 23:57	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 23:57	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/22/14 23:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 23:57	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 23:57	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 23:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 23:57	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 23:57	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 23:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 23:57	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 23:57	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 23:57	
Methylene Chloride	**0.25 IV**	5.0	0.21	1	08/22/14 23:57	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 23:57	
Styrene	0.29 U	1.0	0.29	1	08/22/14 23:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 00:00
Sample Matrix:	Water	**Date Received:**	08/16/14 10:54
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1406262-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 23:57	
Toluene	0.19 U	1.0	0.19	1	08/22/14 23:57	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/22/14 23:57	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 23:57	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 23:57	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 23:57	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 23:57	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 23:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	132	72 - 121	08/22/14 23:57	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 23:57	
Dibromofluoromethane	128	86 - 112	08/22/14 23:57	*
Toluene-d8	94	88 - 115	08/22/14 23:57	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406473-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 03:30	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 03:30	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 03:30	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 03:30	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 03:30	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 03:30	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 03:30	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 03:30	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 03:30	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 03:30	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 03:30	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 03:30	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 03:30	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 03:30	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 03:30	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 03:30	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 03:30	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 03:30	
Acetone	5.6 U	50	5.6	1	08/22/14 03:30	
Benzene	0.21 U	1.0	0.21	1	08/22/14 03:30	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 03:30	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 03:30	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 03:30	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 03:30	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 03:30	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 03:30	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 03:30	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 03:30	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 03:30	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 03:30	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/22/14 03:30	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 03:30	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 03:30	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 03:30	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 03:30	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 03:30	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 03:30	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 03:30	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 03:30	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 03:30	
Methylene Chloride	**1.9 I**	5.0	0.21	1	08/22/14 03:30	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 03:30	
Styrene	0.29 U	1.0	0.29	1	08/22/14 03:30	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406473-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 03:30	
Toluene	0.19 U	1.0	0.19	1	08/22/14 03:30	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/22/14 03:30	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 03:30	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 03:30	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 03:30	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 03:30	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 03:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	119	72 - 121	08/22/14 03:30	
4-Bromofluorobenzene	92	86 - 113	08/22/14 03:30	
Dibromofluoromethane	113	86 - 112	08/22/14 03:30	*
Toluene-d8	96	88 - 115	08/22/14 03:30	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406512-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/22/14 17:45	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/22/14 17:45	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/22/14 17:45	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/22/14 17:45	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/22/14 17:45	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/22/14 17:45	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/22/14 17:45	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/22/14 17:45	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/22/14 17:45	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/22/14 17:45	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/22/14 17:45	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/22/14 17:45	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/22/14 17:45	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/22/14 17:45	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/22/14 17:45	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/22/14 17:45	
2-Hexanone	2.2 U	25	2.2	1	08/22/14 17:45	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/22/14 17:45	
Acetone	5.6 U	50	5.6	1	08/22/14 17:45	
Benzene	0.21 U	1.0	0.21	1	08/22/14 17:45	
Bromochloromethane	0.27 U	5.0	0.27	1	08/22/14 17:45	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/22/14 17:45	
Bromoform	0.42 U	2.0	0.42	1	08/22/14 17:45	
Bromomethane	0.23 U	5.0	0.23	1	08/22/14 17:45	
Carbon Disulfide	2.4 U	10	2.4	1	08/22/14 17:45	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/22/14 17:45	
Chlorobenzene	0.16 U	1.0	0.16	1	08/22/14 17:45	
Chloroethane	0.52 U	5.0	0.52	1	08/22/14 17:45	
Chloroform	0.35 U	1.0	0.35	1	08/22/14 17:45	
Chloromethane	0.36 U	1.0	0.36	1	08/22/14 17:45	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/22/14 17:45	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/22/14 17:45	
Cyclohexane	0.24 U	10	0.24	1	08/22/14 17:45	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/22/14 17:45	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/22/14 17:45	
Ethylbenzene	0.21 U	1.0	0.21	1	08/22/14 17:45	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/22/14 17:45	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/22/14 17:45	
Methyl Acetate	0.84 U	10	0.84	1	08/22/14 17:45	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/22/14 17:45	
Methylene Chloride	**1.8 I**	5.0	0.21	1	08/22/14 17:45	
o-Xylene	0.14 U	1.0	0.14	1	08/22/14 17:45	
Styrene	0.29 U	1.0	0.29	1	08/22/14 17:45	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406512-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/22/14 17:45	
Toluene	0.19 U	1.0	0.19	1	08/22/14 17:45	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/22/14 17:45	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/22/14 17:45	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/22/14 17:45	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/22/14 17:45	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/22/14 17:45	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/22/14 17:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	126	72 - 121	08/22/14 17:45	*
4-Bromofluorobenzene	90	86 - 113	08/22/14 17:45	
Dibromofluoromethane	120	86 - 112	08/22/14 17:45	*
Toluene-d8	93	88 - 115	08/22/14 17:45	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406563-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	08/25/14 14:59	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	08/25/14 14:59	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	08/25/14 14:59	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	08/25/14 14:59	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	08/25/14 14:59	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	08/25/14 14:59	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	08/25/14 14:59	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	08/25/14 14:59	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	08/25/14 14:59	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	08/25/14 14:59	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	08/25/14 14:59	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	08/25/14 14:59	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	08/25/14 14:59	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	08/25/14 14:59	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	08/25/14 14:59	
2-Butanone (MEK)	3.8 U	10	3.8	1	08/25/14 14:59	
2-Hexanone	2.2 U	25	2.2	1	08/25/14 14:59	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	08/25/14 14:59	
Acetone	5.6 U	50	5.6	1	08/25/14 14:59	
Benzene	0.21 U	1.0	0.21	1	08/25/14 14:59	
Bromochloromethane	0.27 U	5.0	0.27	1	08/25/14 14:59	
Bromodichloromethane	0.22 U	1.0	0.22	1	08/25/14 14:59	
Bromoform	0.42 U	2.0	0.42	1	08/25/14 14:59	
Bromomethane	0.23 U	5.0	0.23	1	08/25/14 14:59	
Carbon Disulfide	2.4 U	10	2.4	1	08/25/14 14:59	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	08/25/14 14:59	
Chlorobenzene	0.16 U	1.0	0.16	1	08/25/14 14:59	
Chloroethane	0.52 U	5.0	0.52	1	08/25/14 14:59	
Chloroform	0.35 U	1.0	0.35	1	08/25/14 14:59	
Chloromethane	0.36 U	1.0	0.36	1	08/25/14 14:59	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	08/25/14 14:59	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	08/25/14 14:59	
Cyclohexane	0.24 U	10	0.24	1	08/25/14 14:59	
Dibromochloromethane	0.21 U	1.0	0.21	1	08/25/14 14:59	
Dichlorodifluoromethane	0.23 U	20	0.23	1	08/25/14 14:59	
Ethylbenzene	0.21 U	1.0	0.21	1	08/25/14 14:59	
Isopropylbenzene	0.14 U	1.0	0.14	1	08/25/14 14:59	
m,p-Xylenes	0.31 U	2.0	0.31	1	08/25/14 14:59	
Methyl Acetate	0.84 U	10	0.84	1	08/25/14 14:59	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	08/25/14 14:59	
Methylene Chloride	**0.56 I**	5.0	0.21	1	08/25/14 14:59	
o-Xylene	0.14 U	1.0	0.14	1	08/25/14 14:59	
Styrene	0.29 U	1.0	0.29	1	08/25/14 14:59	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1406563-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	08/25/14 14:59	
Toluene	0.19 U	1.0	0.19	1	08/25/14 14:59	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	08/25/14 14:59	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	08/25/14 14:59	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	08/25/14 14:59	
Trichlorofluoromethane	0.24 U	20	0.24	1	08/25/14 14:59	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	08/25/14 14:59	
Vinyl Chloride	0.36 U	1.0	0.36	1	08/25/14 14:59	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	122	72 - 121	08/25/14 14:59	*
4-Bromofluorobenzene	92	86 - 113	08/25/14 14:59	
Dibromofluoromethane	118	86 - 112	08/25/14 14:59	*
Toluene-d8	96	88 - 115	08/25/14 14:59	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	NA

Conductivity, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	**3844**	-	-	1	08/13/14 11:12	
M505-MW0052-010.0-20140813	J1406262-002	**364**	-	-	1	08/13/14 11:47	
M505-MW0051-025.0-20140813	J1406262-003	**2772**	-	-	1	08/13/14 12:23	
M505-MW0033-025.0-20140813	J1406262-004	**2718**	-	-	1	08/13/14 13:02	
M505-MW0032-035.0-20140813	J1406262-005	**3054**	-	-	1	08/13/14 13:33	
M505-MW0025-025.0-20140813	J1406262-006	**3954**	-	-	1	08/13/14 14:22	
M505-MW0026-035.0-20140813	J1406262-007	**3712**	-	-	1	08/13/14 14:57	
M505-MW0049-027.5-20140813	J1406262-008	**1909**	-	-	1	08/13/14 15:46	
M505-MW0019-025.0-20140813	J1406262-009	**3493**	-	-	1	08/13/14 18:27	
M505-MW0020-036.0-20140813	J1406262-010	**4332**	-	-	1	08/13/14 18:51	
M505-MW0045-034.5-20140814	J1406262-011	**3655**	-	-	1	08/13/14 09:17	
M505-MW0046-010.0-20140814	J1406262-012	**2907**	-	-	1	08/14/14 09:58	
M505-MW0038-025.0-20140814	J1406262-013	**3679**	-	-	1	08/14/14 10:39	
M505-MW0041-025.0-20140814	J1406262-014	**2294**	-	-	1	08/14/14 11:25	
M505-MW0042-035.0-20140814	J1406262-015	**2933**	-	-	1	08/14/14 11:59	
M505-MW0048-027.5-20140814	J1406262-016	**3012**	-	-	1	08/14/14 12:52	
M505-MW0013-025.0-20140814	J1406262-017	**2629**	-	-	1	08/14/14 14:22	
M505-MW0039-032.5-20140814	J1406262-018	**1409**	-	-	1	08/14/14 15:00	
M505-MW0040-025.0-20140814	J1406262-019	**1556**	-	-	1	08/14/14 15:21	
M505-MW0044-027.5-20140814	J1406262-020	**3247**	-	-	1	08/14/14 18:11	
M505-MW0023-025.0-20140815	J1406262-021	**3150**	-	-	1	08/15/14 08:47	
M505-MW0024-035.0-20140815	J1406262-022	**3116**	-	-	1	08/15/14 09:19	
M505-MW0035-025.0-20140815	J1406262-023	**2476**	-	-	1	08/15/14 09:57	
M505-MW0036-035.0-20140815	J1406262-024	**2859**	-	-	1	08/15/14 10:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	150.1	**Units:**	pH Units
		Basis:	NA

pH, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	**7.20**	-	-	1	08/13/14 11:12	
M505-MW0052-010.0-20140813	J1406262-002	**5.73**	-	-	1	08/13/14 11:47	
M505-MW0051-025.0-20140813	J1406262-003	**7.40**	-	-	1	08/13/14 12:23	
M505-MW0033-025.0-20140813	J1406262-004	**6.98**	-	-	1	08/13/14 13:02	
M505-MW0032-035.0-20140813	J1406262-005	**7.05**	-	-	1	08/13/14 13:33	
M505-MW0025-025.0-20140813	J1406262-006	**6.78**	-	-	1	08/13/14 14:22	
M505-MW0026-035.0-20140813	J1406262-007	**6.91**	-	-	1	08/13/14 14:57	
M505-MW0049-027.5-20140813	J1406262-008	**7.07**	-	-	1	08/13/14 15:46	
M505-MW0019-025.0-20140813	J1406262-009	**7.32**	-	-	1	08/13/14 18:27	
M505-MW0020-036.0-20140813	J1406262-010	**7.50**	-	-	1	08/13/14 18:51	
M505-MW0045-034.5-20140814	J1406262-011	**6.94**	-	-	1	08/13/14 09:17	
M505-MW0046-010.0-20140814	J1406262-012	**4.26**	-	-	1	08/14/14 09:58	
M505-MW0038-025.0-20140814	J1406262-013	**6.84**	-	-	1	08/14/14 10:39	
M505-MW0041-025.0-20140814	J1406262-014	**6.91**	-	-	1	08/14/14 11:25	
M505-MW0042-035.0-20140814	J1406262-015	**6.90**	-	-	1	08/14/14 11:59	
M505-MW0048-027.5-20140814	J1406262-016	**7.13**	-	-	1	08/14/14 12:52	
M505-MW0013-025.0-20140814	J1406262-017	**7.32**	-	-	1	08/14/14 14:22	
M505-MW0039-032.5-20140814	J1406262-018	**7.03**	-	-	1	08/14/14 15:00	
M505-MW0040-025.0-20140814	J1406262-019	**6.99**	-	-	1	08/14/14 15:21	
M505-MW0044-027.5-20140814	J1406262-020	**7.15**	-	-	1	08/14/14 18:11	
M505-MW0023-025.0-20140815	J1406262-021	**7.04**	-	-	1	08/15/14 08:47	
M505-MW0024-035.0-20140815	J1406262-022	**7.52**	-	-	1	08/15/14 09:19	
M505-MW0035-025.0-20140815	J1406262-023	**6.97**	-	-	1	08/15/14 09:57	
M505-MW0036-035.0-20140815	J1406262-024	**7.29**	-	-	1	08/15/14 10:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	170.1	**Units:**	deg C
		Basis:	NA

Temperature, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	**27.75**	-	-	1	08/13/14	
M505-MW0052-010.0-20140813	J1406262-002	**27.81**	-	-	1	08/13/14	
M505-MW0051-025.0-20140813	J1406262-003	**27.74**	-	-	1	08/13/14	
M505-MW0033-025.0-20140813	J1406262-004	**28.86**	-	-	1	08/13/14	
M505-MW0032-035.0-20140813	J1406262-005	**31.09**	-	-	1	08/13/14	
M505-MW0025-025.0-20140813	J1406262-006	**27.84**	-	-	1	08/13/14	
M505-MW0026-035.0-20140813	J1406262-007	**26.61**	-	-	1	08/13/14	
M505-MW0049-027.5-20140813	J1406262-008	**28.26**	-	-	1	08/13/14	
M505-MW0019-025.0-20140813	J1406262-009	**28.84**	-	-	1	08/13/14	
M505-MW0020-036.0-20140813	J1406262-010	**28.62**	-	-	1	08/13/14	
M505-MW0045-034.5-20140814	J1406262-011	**29.51**	-	-	1	08/13/14	
M505-MW0046-010.0-20140814	J1406262-012	**30.10**	-	-	1	08/14/14	
M505-MW0038-025.0-20140814	J1406262-013	**29.53**	-	-	1	08/14/14	
M505-MW0041-025.0-20140814	J1406262-014	**27.98**	-	-	1	08/14/14	
M505-MW0042-035.0-20140814	J1406262-015	**28.51**	-	-	1	08/14/14	
M505-MW0048-027.5-20140814	J1406262-016	**30.15**	-	-	1	08/14/14	
M505-MW0013-025.0-20140814	J1406262-017	**30.29**	-	-	1	08/14/14	
M505-MW0039-032.5-20140814	J1406262-018	**27.18**	-	-	1	08/14/14	
M505-MW0040-025.0-20140814	J1406262-019	**26.95**	-	-	1	08/14/14	
M505-MW0044-027.5-20140814	J1406262-020	**26.37**	-	-	1	08/14/14	
M505-MW0023-025.0-20140815	J1406262-021	**26.97**	-	-	1	08/15/14	
M505-MW0024-035.0-20140815	J1406262-022	**27.22**	-	-	1	08/15/14	
M505-MW0035-025.0-20140815	J1406262-023	**26.20**	-	-	1	08/15/14	
M505-MW0036-035.0-20140815	J1406262-024	**25.98**	-	-	1	08/15/14	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	180.1	**Units:**	NTU
		Basis:	NA

Turbidity, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	**6.12**	-	-	1	08/13/14 11:12	
M505-MW0052-010.0-20140813	J1406262-002	**31.3**	-	-	1	08/13/14 11:47	
M505-MW0051-025.0-20140813	J1406262-003	**8.46**	-	-	1	08/13/14 12:23	
M505-MW0033-025.0-20140813	J1406262-004	**11.8**	-	-	1	08/13/14 13:02	
M505-MW0032-035.0-20140813	J1406262-005	**26.1**	-	-	1	08/13/14 13:33	
M505-MW0025-025.0-20140813	J1406262-006	**7.92**	-	-	1	08/13/14 14:22	
M505-MW0026-035.0-20140813	J1406262-007	**3.02**	-	-	1	08/13/14 14:57	
M505-MW0049-027.5-20140813	J1406262-008	**3.16**	-	-	1	08/13/14 15:46	
M505-MW0019-025.0-20140813	J1406262-009	**6.24**	-	-	1	08/13/14 18:27	
M505-MW0020-036.0-20140813	J1406262-010	**7.64**	-	-	1	08/13/14 18:51	
M505-MW0045-034.5-20140814	J1406262-011	**11.8**	-	-	1	08/13/14 09:17	
M505-MW0046-010.0-20140814	J1406262-012	**25.5**	-	-	1	08/14/14 09:58	
M505-MW0038-025.0-20140814	J1406262-013	**8.68**	-	-	1	08/14/14 10:39	
M505-MW0041-025.0-20140814	J1406262-014	**36.1**	-	-	1	08/14/14 11:25	
M505-MW0042-035.0-20140814	J1406262-015	**8.92**	-	-	1	08/14/14 11:59	
M505-MW0048-027.5-20140814	J1406262-016	**7.12**	-	-	1	08/14/14 12:52	
M505-MW0013-025.0-20140814	J1406262-017	**9.12**	-	-	1	08/14/14 14:22	
M505-MW0039-032.5-20140814	J1406262-018	**6.82**	-	-	1	08/14/14 15:00	
M505-MW0040-025.0-20140814	J1406262-019	**9.70**	-	-	1	08/14/14 15:21	
M505-MW0044-027.5-20140814	J1406262-020	**7.22**	-	-	1	08/14/14 18:11	
M505-MW0023-025.0-20140815	J1406262-021	**2.68**	-	-	1	08/15/14 08:47	
M505-MW0024-035.0-20140815	J1406262-022	**4.22**	-	-	1	08/15/14 09:19	
M505-MW0035-025.0-20140815	J1406262-023	**10.2**	-	-	1	08/15/14 09:57	
M505-MW0036-035.0-20140815	J1406262-024	**9.42**	-	-	1	08/15/14 10:29	

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	Depth Field	**Units:**	Feet
		Basis:	NA

Depth

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	**7.24**	-	-	1	08/13/14 11:12	
M505-MW0052-010.0-20140813	J1406262-002	**7.15**	-	-	1	08/13/14 11:47	
M505-MW0051-025.0-20140813	J1406262-003	**7.33**	-	-	1	08/13/14 12:23	
M505-MW0033-025.0-20140813	J1406262-004	**8.10**	-	-	1	08/13/14 13:02	
M505-MW0032-035.0-20140813	J1406262-005	**8.78**	-	-	1	08/13/14 13:33	
M505-MW0025-025.0-20140813	J1406262-006	**7.99**	-	-	1	08/13/14 14:22	
M505-MW0026-035.0-20140813	J1406262-007	**9.23**	-	-	1	08/13/14 14:57	
M505-MW0049-027.5-20140813	J1406262-008	**8.23**	-	-	1	08/13/14 15:46	
M505-MW0019-025.0-20140813	J1406262-009	**6.57**	-	-	1	08/13/14 18:27	
M505-MW0020-036.0-20140813	J1406262-010	**6.68**	-	-	1	08/13/14 18:51	
M505-MW0045-034.5-20140814	J1406262-011	**6.29**	-	-	1	08/13/14 09:17	
M505-MW0046-010.0-20140814	J1406262-012	**6.20**	-	-	1	08/14/14 09:58	
M505-MW0038-025.0-20140814	J1406262-013	**6.10**	-	-	1	08/14/14 10:39	
M505-MW0041-025.0-20140814	J1406262-014	**6.20**	-	-	1	08/14/14 11:25	
M505-MW0042-035.0-20140814	J1406262-015	**6.25**	-	-	1	08/14/14 11:59	
M505-MW0048-027.5-20140814	J1406262-016	**6.15**	-	-	1	08/14/14 12:52	
M505-MW0013-025.0-20140814	J1406262-017	**6.45**	-	-	1	08/14/14 14:22	
M505-MW0039-032.5-20140814	J1406262-018	**5.48**	-	-	1	08/14/14 15:00	
M505-MW0040-025.0-20140814	J1406262-019	**5.88**	-	-	1	08/14/14 15:21	
M505-MW0044-027.5-20140814	J1406262-020	**5.24**	-	-	1	08/14/14 18:11	
M505-MW0023-025.0-20140815	J1406262-021	**6.02**	-	-	1	08/15/14 08:47	
M505-MW0024-035.0-20140815	J1406262-022	**7.52**	-	-	1	08/15/14 09:19	
M505-MW0035-025.0-20140815	J1406262-023	**4.23**	-	-	1	08/15/14 09:57	
M505-MW0036-035.0-20140815	J1406262-024	**3.87**	-	-	1	08/15/14 10:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Collected:**	08/13/14 - 08/15/14
Sample Matrix:	Water	**Date Received:**	08/16/14
Analysis Method:	SM 4500-O G	**Units:**	mg/L
		Basis:	NA

Dissolved Oxygen, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0055-025.0-20140813	J1406262-001	ND U	1.0	1.0	1	08/13/14 11:12	
M505-MW0052-010.0-20140813	J1406262-002	ND U	1.0	1.0	1	08/13/14 11:47	
M505-MW0051-025.0-20140813	J1406262-003	ND U	1.0	1.0	1	08/13/14 12:23	
M505-MW0033-025.0-20140813	J1406262-004	**1.3**	1.0	1.0	1	08/13/14 13:02	
M505-MW0032-035.0-20140813	J1406262-005	**4.0**	1.0	1.0	1	08/13/14 13:33	
M505-MW0025-025.0-20140813	J1406262-006	ND U	1.0	1.0	1	08/13/14 14:22	
M505-MW0026-035.0-20140813	J1406262-007	ND U	1.0	1.0	1	08/13/14 14:57	
M505-MW0049-027.5-20140813	J1406262-008	ND U	1.0	1.0	1	08/13/14 15:46	
M505-MW0019-025.0-20140813	J1406262-009	**6.0**	1.0	1.0	1	08/13/14 18:27	
M505-MW0020-036.0-20140813	J1406262-010	**5.6**	1.0	1.0	1	08/13/14 18:51	
M505-MW0045-034.5-20140814	J1406262-011	ND U	1.0	1.0	1	08/13/14 09:17	
M505-MW0046-010.0-20140814	J1406262-012	**1.1**	1.0	1.0	1	08/14/14 09:58	
M505-MW0038-025.0-20140814	J1406262-013	ND U	1.0	1.0	1	08/14/14 10:39	
M505-MW0041-025.0-20140814	J1406262-014	ND U	1.0	1.0	1	08/14/14 11:25	
M505-MW0042-035.0-20140814	J1406262-015	ND U	1.0	1.0	1	08/14/14 11:59	
M505-MW0048-027.5-20140814	J1406262-016	**2.9**	1.0	1.0	1	08/14/14 12:52	
M505-MW0013-025.0-20140814	J1406262-017	**6.1**	1.0	1.0	1	08/14/14 14:22	
M505-MW0039-032.5-20140814	J1406262-018	**2.2**	1.0	1.0	1	08/14/14 15:00	
M505-MW0040-025.0-20140814	J1406262-019	ND U	1.0	1.0	1	08/14/14 15:21	
M505-MW0044-027.5-20140814	J1406262-020	ND U	1.0	1.0	1	08/14/14 18:11	
M505-MW0023-025.0-20140815	J1406262-021	**2.0**	1.0	1.0	1	08/15/14 08:47	
M505-MW0024-035.0-20140815	J1406262-022	**6.2**	1.0	1.0	1	08/15/14 09:19	
M505-MW0035-025.0-20140815	J1406262-023	ND U	1.0	1.0	1	08/15/14 09:57	
M505-MW0036-035.0-20140815	J1406262-024	**1.2**	1.0	1.0	1	08/15/14 10:29	

Client: Levine Fricke **Service Request:** J1406262
Project: NASA M505/TL014020.0001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-MW0055-025.0-20140813	J1406262-001	129 *	90	126 *
M505-MW0052-010.0-20140813	J1406262-002	127 *	91	122 *
M505-MW0051-025.0-20140813	J1406262-003	128 *	88	124 *
M505-MW0033-025.0-20140813	J1406262-004	128 *	90	124 *
M505-MW0032-035.0-20140813	J1406262-005	127 *	88	122 *
M505-MW0025-025.0-20140813	J1406262-006	129 *	90	123 *
M505-MW0026-035.0-20140813	J1406262-007	128 *	91	123 *
M505-MW0049-027.5-20140813	J1406262-008	125 *	89	122 *
M505-MW0019-025.0-20140813	J1406262-009	130 *	89	122 *
M505-MW0020-036.0-20140813	J1406262-010	131 *	90	126 *
M505-MW0045-034.5-20140814	J1406262-011	129 *	90	123 *
M505-MW0046-010.0-20140814	J1406262-012	129 *	92	123 *
M505-MW0038-025.0-20140814	J1406262-013	135 *	88	126 *
M505-MW0041-025.0-20140814	J1406262-014	130 *	87	124 *
M505-MW0042-035.0-20140814	J1406262-015	128 *	91	125 *
M505-MW0048-027.5-20140814	J1406262-016	130 *	90	124 *
M505-MW0013-025.0-20140814	J1406262-017	131 *	90	127 *
M505-MW0039-032.5-20140814	J1406262-018	131 *	89	126 *
M505-MW0040-025.0-20140814	J1406262-019	133 *	92	129 *
M505-MW0044-027.5-20140814	J1406262-020	136 *	89	128 *
M505-MW0023-025.0-20140815	J1406262-021	125 *	90	119 *
M505-MW0024-035.0-20140815	J1406262-022	128 *	91	122 *
M505-MW0035-025.0-20140815	J1406262-023	125 *	92	120 *
M505-MW0036-035.0-20140815	J1406262-024	129 *	91	119 *
Trip Blank	J1406262-025	132 *	90	128 *
Lab Control Sample	JQ1406473-01	99	99	98
Duplicate Lab Control Sample	JQ1406473-02	95	100	96
Method Blank	JQ1406473-03	119	92	113 *
Lab Control Sample	JQ1406512-01	98	100	97
Duplicate Lab Control Sample	JQ1406512-02	98	98	98
Method Blank	JQ1406512-03	126 *	90	120 *
Lab Control Sample	JQ1406563-01	99	98	98
Duplicate Lab Control Sample	JQ1406563-02	97	102	97
Method Blank	JQ1406563-03	122 *	92	118 *

Client: Levine Fricke **Service Request:** J1406262
Project: NASA M505/TL014020.0001
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-MW0055-025.0-20140813	J1406262-001	95
M505-MW0052-010.0-20140813	J1406262-002	94
M505-MW0051-025.0-20140813	J1406262-003	96
M505-MW0033-025.0-20140813	J1406262-004	94
M505-MW0032-035.0-20140813	J1406262-005	94
M505-MW0025-025.0-20140813	J1406262-006	94
M505-MW0026-035.0-20140813	J1406262-007	94
M505-MW0049-027.5-20140813	J1406262-008	97
M505-MW0019-025.0-20140813	J1406262-009	94
M505-MW0020-036.0-20140813	J1406262-010	94
M505-MW0045-034.5-20140814	J1406262-011	95
M505-MW0046-010.0-20140814	J1406262-012	95
M505-MW0038-025.0-20140814	J1406262-013	92
M505-MW0041-025.0-20140814	J1406262-014	95
M505-MW0042-035.0-20140814	J1406262-015	95
M505-MW0048-027.5-20140814	J1406262-016	94
M505-MW0013-025.0-20140814	J1406262-017	93
M505-MW0039-032.5-20140814	J1406262-018	96
M505-MW0040-025.0-20140814	J1406262-019	93
M505-MW0044-027.5-20140814	J1406262-020	91
M505-MW0023-025.0-20140815	J1406262-021	94
M505-MW0024-035.0-20140815	J1406262-022	95
M505-MW0035-025.0-20140815	J1406262-023	96
M505-MW0036-035.0-20140815	J1406262-024	95
Trip Blank	J1406262-025	94
Lab Control Sample	JQ1406473-01	98
Duplicate Lab Control Sample	JQ1406473-02	100
Method Blank	JQ1406473-03	96
Lab Control Sample	JQ1406512-01	99
Duplicate Lab Control Sample	JQ1406512-02	99
Method Blank	JQ1406512-03	93
Lab Control Sample	JQ1406563-01	97
Duplicate Lab Control Sample	JQ1406563-02	100
Method Blank	JQ1406563-03	96

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Analyzed:**	08/22/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	407895

	Lab Control Sample JQ1406473-01			Duplicate Lab Control Sample JQ1406473-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	50.5	50.0	101	50.8	50.0	102	77-118	<1	30
1,1,1-Trichloroethane (TCA)	46.3	50.0	93	46.6	50.0	93	70-122	<1	30
1,1,2,2-Tetrachloroethane	49.6	50.0	99	50.5	50.0	101	66-135	2	30
1,1,2-Trichloroethane	47.8	50.0	96	48.4	50.0	97	75-122	1	30
1,1-Dichloroethane (1,1-DCA)	46.0	50.0	92	45.6	50.0	91	79-117	<1	30
1,1-Dichloroethene (1,1-DCE)	47.5	50.0	95	47.6	50.0	95	72-128	<1	30
1,2,3-Trichlorobenzene	45.8	50.0	92	48.1	50.0	96	62-136	5	30
1,2,4-Trichlorobenzene	43.2	50.0	86	45.7	50.0	91	66-127	6	30
1,2-Dibromo-3-chloropropane (DBCP)	40.7	50.0	81	43.9	50.0	88	60-122	8	30
1,2-Dibromoethane (EDB)	50.1	50.0	100	52.4	50.0	105	76-118	5	30
1,2-Dichlorobenzene	48.0	50.0	96	49.8	50.0	100	81-115	3	30
1,2-Dichloroethane	48.4	50.0	97	47.7	50.0	95	70-117	1	30
1,2-Dichloropropane	46.9	50.0	94	47.3	50.0	95	79-117	<1	30
1,3-Dichlorobenzene	50.4	50.0	101	52.2	50.0	104	82-116	3	30
1,4-Dichlorobenzene	49.5	50.0	99	51.6	50.0	103	82-115	4	30
2-Butanone (MEK)	44.2	50.0	88	44.6	50.0	89	62-138	<1	30
2-Hexanone	47.3	50.0	95	50.2	50.0	100	74-127	6	30
4-Methyl-2-pentanone (MIBK)	47.2	50.0	94	46.8	50.0	94	77-120	<1	30
Acetone	50.6	50.0	101	51.8	50.0	104	42-161	2	30
Benzene	49.0	50.0	98	48.8	50.0	98	80-117	<1	30
Bromochloromethane	50.2	50.0	100	50.0	50.0	100	78-118	<1	30
Bromodichloromethane	51.4	50.0	103	51.2	50.0	102	75-118	<1	30
Bromoform	49.4	50.0	99	50.4	50.0	101	63-121	2	30
Bromomethane	49.0	50.0	98	48.7	50.0	97	31-153	<1	30
Carbon Disulfide	47.6	50.0	95	47.1	50.0	94	72-128	1	30
Carbon Tetrachloride	48.4	50.0	97	48.2	50.0	96	67-124	<1	30
Chlorobenzene	50.8	50.0	102	51.9	50.0	104	83-118	2	30
Chloroethane	47.4	50.0	95	46.5	50.0	93	68-132	2	30
Chloroform	47.3	50.0	95	46.4	50.0	93	77-116	2	30
Chloromethane	44.0	50.0	88	42.1	50.0	84	60-128	4	30
cis-1,2-Dichloroethene	49.2	50.0	98	49.3	50.0	99	78-117	<1	30
cis-1,3-Dichloropropene	45.5	50.0	91	46.5	50.0	93	80-119	2	30
Cyclohexane	45.8	50.0	92	46.5	50.0	93	75-124	2	30
Dibromochloromethane	47.8	50.0	96	49.2	50.0	98	74-121	3	30
Dichlorodifluoromethane	39.8	50.0	80	39.9	50.0	80	49-132	<1	30
Ethylbenzene	54.1	50.0	108	56.1	50.0	112	82-119	4	30
Isopropylbenzene	45.7	50.0	91	47.9	50.0	96	78-119	5	30
m,p-Xylenes	101	100	101	104	100	104	79-122	3	30
Methyl Acetate	44.4	50.0	89	46.0	50.0	92	50-137	4	30
Methyl tert-Butyl Ether	48.8	50.0	98	50.1	50.0	100	73-118	3	30
Methylene Chloride	47.4	50.0	95	47.2	50.0	94	75-123	<1	30

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Analyzed:**	08/22/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	407895

	Lab Control Sample JQ1406473-01			Duplicate Lab Control Sample JQ1406473-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	51.2	50.0	102	53.1	50.0	106	80-119	4	30
Styrene	45.6	50.0	91	47.7	50.0	95	80-121	4	30
Tetrachloroethene (PCE)	47.9	50.0	96	50.1	50.0	100	75-126	4	30
Toluene	49.1	50.0	98	50.5	50.0	101	52-152	3	30
trans-1,2-Dichloroethene	48.6	50.0	97	48.2	50.0	96	75-121	<1	30
trans-1,3-Dichloropropene	51.8	50.0	104	52.7	50.0	105	76-118	2	30
Trichloroethene (TCE)	47.2	50.0	94	47.2	50.0	94	78-122	<1	30
Trichlorofluoromethane	46.9	50.0	94	46.8	50.0	94	58-134	<1	30
Trichlorotrifluoroethane	45.6	50.0	91	46.0	50.0	92	77-128	<1	30
Vinyl Chloride	44.4	50.0	89	43.2	50.0	86	69-138	3	30

Client: Levine Fricke
Project: NASA M505/TL014020.0001
Sample Matrix: Water

Service Request: J1406262
Date Analyzed: 08/22/14

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Units: ug/L
Basis: NA
Analysis Lot: 408066

	Lab Control Sample JQ1406512-01			Duplicate Lab Control Sample JQ1406512-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	51.4	50.0	103	51.3	50.0	102	77-118	<1	30
1,1,1-Trichloroethane (TCA)	45.6	50.0	91	44.6	50.0	89	70-122	2	30
1,1,2,2-Tetrachloroethane	53.3	50.0	107	52.0	50.0	104	66-135	2	30
1,1,2-Trichloroethane	48.5	50.0	97	48.4	50.0	97	75-122	<1	30
1,1-Dichloroethane (1,1-DCA)	44.3	50.0	89	43.9	50.0	88	79-117	<1	30
1,1-Dichloroethene (1,1-DCE)	45.1	50.0	90	44.6	50.0	89	72-128	1	30
1,2,3-Trichlorobenzene	45.5	50.0	91	45.7	50.0	91	62-136	<1	30
1,2,4-Trichlorobenzene	42.1	50.0	84	43.3	50.0	87	66-127	3	30
1,2-Dibromo-3-chloropropane (DBCP)	46.1	50.0	92	45.8	50.0	92	60-122	<1	30
1,2-Dibromoethane (EDB)	50.8	50.0	102	51.5	50.0	103	76-118	1	30
1,2-Dichlorobenzene	46.2	50.0	92	45.5	50.0	91	81-115	1	30
1,2-Dichloroethane	46.9	50.0	94	47.1	50.0	94	70-117	<1	30
1,2-Dichloropropane	44.5	50.0	89	45.1	50.0	90	79-117	1	30
1,3-Dichlorobenzene	48.8	50.0	98	48.4	50.0	97	82-116	<1	30
1,4-Dichlorobenzene	48.1	50.0	96	48.2	50.0	96	82-115	<1	30
2-Butanone (MEK)	49.9	50.0	100	52.5	50.0	105	62-138	5	30
2-Hexanone	57.2	50.0	114	56.2	50.0	112	74-127	2	30
4-Methyl-2-pentanone (MIBK)	53.0	50.0	106	53.4	50.0	107	77-120	<1	30
Acetone	55.2	50.0	110	55.9	50.0	112	42-161	1	30
Benzene	47.2	50.0	94	47.0	50.0	94	80-117	<1	30
Bromochloromethane	45.2	50.0	90	46.2	50.0	92	78-118	2	30
Bromodichloromethane	49.8	50.0	100	49.8	50.0	100	75-118	<1	30
Bromoform	52.6	50.0	105	52.5	50.0	105	63-121	<1	30
Bromomethane	37.0	50.0	74	38.6	50.0	77	31-153	4	30
Carbon Disulfide	45.8	50.0	92	44.5	50.0	89	72-128	3	30
Carbon Tetrachloride	48.2	50.0	96	46.8	50.0	94	67-124	3	30
Chlorobenzene	51.3	50.0	103	49.9	50.0	100	83-118	3	30
Chloroethane	45.1	50.0	90	43.8	50.0	88	68-132	3	30
Chloroform	45.5	50.0	91	45.9	50.0	92	77-116	<1	30
Chloromethane	44.2	50.0	88	42.9	50.0	86	60-128	3	30
cis-1,2-Dichloroethene	46.9	50.0	94	47.5	50.0	95	78-117	1	30
cis-1,3-Dichloropropene	45.2	50.0	90	45.1	50.0	90	80-119	<1	30
Cyclohexane	43.5	50.0	87	43.1	50.0	86	75-124	1	30
Dibromochloromethane	48.8	50.0	98	47.9	50.0	96	74-121	2	30
Dichlorodifluoromethane	38.6	50.0	77	36.8	50.0	74	49-132	5	30
Ethylbenzene	53.6	50.0	107	52.3	50.0	105	82-119	2	30
Isopropylbenzene	43.4	50.0	87	42.9	50.0	86	78-119	1	30
m,p-Xylenes	102	100	102	99.0	100	99	79-122	3	30
Methyl Acetate	47.6	50.0	95	48.8	50.0	98	50-137	2	30
Methyl tert-Butyl Ether	47.4	50.0	95	49.2	50.0	98	73-118	4	30
Methylene Chloride	46.0	50.0	92	45.7	50.0	91	75-123	<1	30

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Analyzed:**	08/22/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	408066

	Lab Control Sample JQ1406512-01			Duplicate Lab Control Sample JQ1406512-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	52.2	50.0	104	50.4	50.0	101	80-119	3	30
Styrene	43.8	50.0	88	43.8	50.0	88	80-121	<1	30
Tetrachloroethene (PCE)	50.0	50.0	100	47.1	50.0	94	75-126	6	30
Toluene	49.1	50.0	98	47.6	50.0	95	52-152	3	30
trans-1,2-Dichloroethene	46.8	50.0	94	46.2	50.0	92	75-121	1	30
trans-1,3-Dichloropropene	52.1	50.0	104	51.6	50.0	103	76-118	<1	30
Trichloroethene (TCE)	44.1	50.0	88	44.4	50.0	89	78-122	<1	30
Trichlorofluoromethane	46.6	50.0	93	45.5	50.0	91	58-134	2	30
Trichlorotrifluoroethane	45.4	50.0	91	44.4	50.0	89	77-128	2	30
Vinyl Chloride	40.7	50.0	81	40.8	50.0	82	69-138	<1	30

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Analyzed:**	08/25/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	408325

	Lab Control Sample JQ1406563-01			Duplicate Lab Control Sample JQ1406563-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	50.2	50.0	100	50.4	50.0	101	77-118	<1	30
1,1,1-Trichloroethane (TCA)	46.5	50.0	93	45.9	50.0	92	70-122	1	30
1,1,2,2-Tetrachloroethane	49.5	50.0	99	49.5	50.0	99	66-135	<1	30
1,1,2-Trichloroethane	47.3	50.0	95	48.4	50.0	97	75-122	2	30
1,1-Dichloroethane (1,1-DCA)	44.8	50.0	90	44.9	50.0	90	79-117	<1	30
1,1-Dichloroethene (1,1-DCE)	45.4	50.0	91	45.5	50.0	91	72-128	<1	30
1,2,3-Trichlorobenzene	45.4	50.0	91	48.1	50.0	96	62-136	6	30
1,2,4-Trichlorobenzene	43.2	50.0	86	46.2	50.0	92	66-127	7	30
1,2-Dibromo-3-chloropropane (DBCP)	44.6	50.0	89	45.9	50.0	92	60-122	3	30
1,2-Dibromoethane (EDB)	50.0	50.0	100	51.2	50.0	102	76-118	2	30
1,2-Dichlorobenzene	46.7	50.0	93	49.4	50.0	99	81-115	6	30
1,2-Dichloroethane	47.7	50.0	95	47.8	50.0	96	70-117	<1	30
1,2-Dichloropropane	45.8	50.0	92	45.0	50.0	90	79-117	2	30
1,3-Dichlorobenzene	48.7	50.0	97	51.6	50.0	103	82-116	6	30
1,4-Dichlorobenzene	47.8	50.0	96	50.8	50.0	102	82-115	6	30
2-Butanone (MEK)	47.3	50.0	95	46.3	50.0	92	62-138	2	30
2-Hexanone	48.9	50.0	98	49.7	50.0	99	74-127	2	30
4-Methyl-2-pentanone (MIBK)	46.6	50.0	93	48.8	50.0	98	77-120	5	30
Acetone	50.4	50.0	101	48.6	50.0	97	42-161	4	30
Benzene	46.9	50.0	94	46.8	50.0	94	80-117	<1	30
Bromochloromethane	49.1	50.0	98	48.3	50.0	97	78-118	2	30
Bromodichloromethane	51.3	50.0	103	50.9	50.0	102	75-118	<1	30
Bromoform	53.5	50.0	107	52.7	50.0	105	63-121	2	30
Bromomethane	42.7	50.0	85	42.2	50.0	84	31-153	1	30
Carbon Disulfide	45.7	50.0	91	45.1	50.0	90	72-128	1	30
Carbon Tetrachloride	48.0	50.0	96	48.5	50.0	97	67-124	1	30
Chlorobenzene	49.4	50.0	99	50.3	50.0	101	83-118	2	30
Chloroethane	46.9	50.0	94	45.4	50.0	91	68-132	3	30
Chloroform	46.3	50.0	93	46.2	50.0	92	77-116	<1	30
Chloromethane	46.7	50.0	93	45.4	50.0	91	60-128	3	30
cis-1,2-Dichloroethene	47.5	50.0	95	47.6	50.0	95	78-117	<1	30
cis-1,3-Dichloropropene	45.5	50.0	91	46.7	50.0	93	80-119	3	30
Cyclohexane	43.5	50.0	87	43.4	50.0	87	75-124	<1	30
Dibromochloromethane	49.1	50.0	98	49.7	50.0	99	74-121	1	30
Dichlorodifluoromethane	37.4	50.0	75	36.9	50.0	74	49-132	1	30
Ethylbenzene	51.3	50.0	103	53.3	50.0	107	82-119	4	30
Isopropylbenzene	43.6	50.0	87	46.1	50.0	92	78-119	6	30
m,p-Xylenes	98.1	100	98	100	100	100	79-122	2	30
Methyl Acetate	45.5	50.0	91	45.1	50.0	90	50-137	<1	30
Methyl tert-Butyl Ether	49.0	50.0	98	49.0	50.0	98	73-118	<1	30
Methylene Chloride	45.7	50.0	91	45.2	50.0	90	75-123	1	30

Client:	Levine Fricke	**Service Request:**	J1406262
Project:	NASA M505/TL014020.0001	**Date Analyzed:**	08/25/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	408325

	Lab Control Sample JQ1406563-01			Duplicate Lab Control Sample JQ1406563-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	49.0	50.0	98	51.3	50.0	102	80-119	4	30
Styrene	43.7	50.0	87	45.1	50.0	90	80-121	3	30
Tetrachloroethene (PCE)	46.9	50.0	94	48.4	50.0	97	75-126	3	30
Toluene	47.2	50.0	94	48.6	50.0	97	52-152	3	30
trans-1,2-Dichloroethene	46.2	50.0	92	47.0	50.0	94	75-121	2	30
trans-1,3-Dichloropropene	54.1	50.0	108	53.8	50.0	108	76-118	<1	30
Trichloroethene (TCE)	44.9	50.0	90	45.6	50.0	91	78-122	1	30
Trichlorofluoromethane	46.0	50.0	92	45.5	50.0	91	58-134	1	30
Trichlorotrifluoroethane	44.0	50.0	88	43.9	50.0	88	77-128	<1	30
Vinyl Chloride	42.5	50.0	85	41.9	50.0	84	69-138	2	30

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: JM06262

Project: NASA M505

Cooler received on 8/16/14 and opened on 8/18/14 by UA

COURIER: ALS (UPS) FEDEX Client Other _____ Airbill # 1452 583 1107 0

1	Were custody seals on outside of cooler?	Yes	(No)
	If yes, how many and where?	#:___ on lid	other
2	Were seals intact and signature and date correct?	Yes	No (N/A)
3	Were custody papers properly filled out?	(Yes)	No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	3.0	
5	Thermometer ID	T81	
6	Temperature Blank Present?	(Yes)	No
7	Were Ice or Ice Packs present	(Ice)	Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No N/A
9	Type of packing material present	Netting	Vial Holder (Bubble Wrap)
		Paper	Styrofoam Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No N/A
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No N/A
12	Were the correct bottles used for the tests indicated?	(Yes)	No N/A
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No (N/A)
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2		
	Preservative additions noted below		
14	Were all samples received within analysis holding times?	(Yes)	No N/A
15	Were all VOA vials free of air bubbles? If present, note below	(Yes)	No N/A
16	Where did the bottles originate?	(ALS)	Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR# J1406262
CAS Contract

Project Name: NASA M505	Project Number: TL014020.0001
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@ARCADIS-US.COM
Company/Address: Arcadis 14025 Riveredge Dr #600 TAMPA FL 33637	
Phone #: 813-394-9378	FAX #: —
Sampler's Signature:	Sampler's Printed Name: David Dankert

ANALYSIS REQUESTED (Include Method Number a

J1406262 5

Levine Fricke
NASA M505

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 3

VOC's

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	VOC's
M505-MW0055-025.0-20140813		8/13/14	1112	GW	3	X
M505-MW0052-010.0-20140813			1147		3	X
M505-MW0051-025.0-20140813			1223		3	X
M505-MW0033-025.0-20140813			1302		3	X
M505-MW0032-035.0-20140813			1333		3	X
M505-MW0025-025.0-20140813			1422		3	X
M505-MW0026-035.0-20140813			1457		3	X
M505-MW0049-027.5-20140813			1546		3	X
M505-MW0029-025.0-20140813			1627		3	X
M505-MW0020-036.0-20140813			1851		3	X
M505-MW0045-034.5-20140814		8/14/14	0917	GW	3	X

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 3.0 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name: JAIME ALVAREZ	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 8/15/14 UPS	Date/Time: 8/16/14 1054	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR# J1406262
CAS Contract

J1406262 5
Levine Fricke
NASA M505

Project Name	Project Number
NASA M505	TL01402.0001
Project Manager	**Email Address**
SCOTT. STARR	SCOTT.STARR@Arcadis-US.com
Company/Address	
Arcadis	
14025 Riveredge Dr #600	
TAMPA FL 33637	
Phone #	**FAX #**
813-394-9378	—
Sampler's Signature	**Sampler's Printed Name**
	David Dankert

ANALYSIS REQUESTED (Include Method Number a

PRESERVATIVE: 1

NUMBER OF CONTAINERS: VOCs

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX		
M505-MW0046-010.0	-20140814	8/14/14	0958	GW	3	X
M505-MW0038-025.0	-20140814		1039		3	X
M505-MW0041-025.0	-20140814		1125		3	X
M505-MW0042-035.0	-20140814		1159		3	X
M505-MW0048-027.5	-20140814		1252		3	X
M505-MW0013-025.0	-20140814		1422		3	X
M505-MW0039-032.5	-20140814		1500		3	X
M505-MW0040-025.0	-20140814		1521		3	X
M505-MW0044-027.5	-20140814		1811		3	X
M505-MW0023-025.0	-20140815	8/15/14	0847		3	X
M505-MW0024-035.0	-20140815	8/15/14	0919		3	X

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 3-0 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: David Dankert	Printed Name: Sadira Alvarez	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 8/15/14 UPS	Date/Time: 8/16/14 1059	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR# J1406262
CAS Contract

Project Name: NASA M505	Project Number: TL014020.0001
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@arcadis-us.com
Company/Address: Arcadis 14025 Riveredge Dr TAMPA FL 33637	
Phone #: 813-394-9378	FAX #: —
Sampler's Signature:	Sampler's Printed Name: David Dankel

ANALYSIS REQUESTED (Include Method Num) J1406262 5
Levine Fricke
NASA M505

PRESERVATIVE: 1

NUMBER OF CONTAINERS: VOAs 15

Key:
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS		REMARKS/ ALTERNATE DESCRIPTION
M505-MW0035-025.0-20140815		8/15/14	0957	GW	3	X	
M505-MW0036-035.0-20140815		8/15/14	1029	GW	3	X	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
_____ STANDARD
REQUESTED FAX DATE
_____
REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____Yes _____No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 3.0 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKEL	Printed Name: Jadira Alvarez	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 8/15/14 UPS	Date/Time: 8/16/14 1054	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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December 18, 2014 Service Request No:J1409200

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA M505

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory November 26, 2014
For your reference, these analyses have been assigned our service request number **J1409200.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0013-025.5-20141124	Lab ID: J1409200-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2338				uMHOS/c	120.1
pH, Field	6.74				pH Units	150.1
Temperature, Field	28.20				deg C	170.1
Turbidity, Field	0.99				NTU	180.1
cis-1,2-Dichloroethene	2.3		0.36	1.0	ug/L	8260B
Trichloroethene (TCE)	4.5		0.36	1.0	ug/L	8260B
Depth	6.38				Feet	Depth Field
Dissolved Oxygen, Field	2.6		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0055-025.0-20141124	Lab ID: J1409200-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1884				uMHOS/c	120.1
pH, Field	6.95				pH Units	150.1
Temperature, Field	26.0				deg C	170.1
Turbidity, Field	1.8				NTU	180.1
Vinyl Chloride	0.41	I	0.36	1.0	ug/L	8260B
Depth	7.20				Feet	Depth Field
Dissolved Oxygen, Field	0.27		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0052-010.0-20141124	Lab ID: J1409200-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	328				uMHOS/c	120.1
pH, Field	5.29				pH Units	150.1
Temperature, Field	27.5				deg C	170.1
Turbidity, Field	12				NTU	180.1
cis-1,2-Dichloroethene	22		0.72	2.0	ug/L	8260B
trans-1,2-Dichloroethene	0.70	I	0.38	2.0	ug/L	8260B
Vinyl Chloride	2.2		0.72	2.0	ug/L	8260B
Depth	7.10				Feet	Depth Field
Dissolved Oxygen, Field	0.45		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0039-032.5-20141124	Lab ID: J1409200-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1478				uMHOS/c	120.1
pH, Field	6.69				pH Units	150.1
Temperature, Field	29.17				deg C	170.1
Turbidity, Field	0.55				NTU	180.1
Acetone	10	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	20		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.78	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	6.5		0.36	1.0	ug/L	8260B
Depth	5.58				Feet	Depth Field
Dissolved Oxygen, Field	3.8		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0039-032.5-20141124	Lab ID: J1409200-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**

CLIENT ID: M505-MW0051-025.0-20141124	Lab ID: J1409200-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1589				uMHOS/c	120.1
pH, Field	7.05				pH Units	150.1
Temperature, Field	26.0				deg C	170.1
Turbidity, Field	3.6				NTU	180.1
1,1-Dichloroethene (1,1-DCE)	0.63	I	0.16	1.0	ug/L	8260B
Acetone	6.6	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	88		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.0		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	9.9		0.36	1.0	ug/L	8260B
Vinyl Chloride	45		0.36	1.0	ug/L	8260B
Depth	7.37				Feet	Depth Field
Dissolved Oxygen, Field	0.46		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0033-025.0-20141124	Lab ID: J1409200-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1905				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	26.2				deg C	170.1
Turbidity, Field	2.8				NTU	180.1
cis-1,2-Dichloroethene	17		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.46	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	4.7		0.36	1.0	ug/L	8260B
Vinyl Chloride	0.62	I	0.36	1.0	ug/L	8260B
Depth	8.03				Feet	Depth Field
Dissolved Oxygen, Field	0.99		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0040-025.0-20141124	Lab ID: J1409200-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1464				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	28.72				deg C	170.1
Turbidity, Field	0.63				NTU	180.1
Acetone	5.9	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	6.1		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.21	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	5.0		0.36	1.0	ug/L	8260B
Depth	5.80				Feet	Depth Field
Dissolved Oxygen, Field	0.37		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0032-035.0-20141124	Lab ID: J1409200-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1753				uMHOS/c	120.1
pH, Field	6.81				pH Units	150.1
Temperature, Field	26.0				deg C	170.1
Turbidity, Field	3.5				NTU	180.1
Acetone	8.0	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	220		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.78	I	0.19	1.0	ug/L	8260B
Vinyl Chloride	25		0.36	1.0	ug/L	8260B
Depth	8.58				Feet	Depth Field
Dissolved Oxygen, Field	0.73		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0044-027.5-20141124	Lab ID: J1409200-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2465				uMHOS/c	120.1
pH, Field	6.65				pH Units	150.1
Temperature, Field	27.46				deg C	170.1
Turbidity, Field	2.86				NTU	180.1
Acetone	6.2	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	2.2		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.20	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	4.5		0.36	1.0	ug/L	8260B
Depth	5.27				Feet	Depth Field
Dissolved Oxygen, Field	0.92		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0025-025.0-20141124	Lab ID: J1409200-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3130				uMHOS/c	120.1
pH, Field	6.63				pH Units	150.1
Temperature, Field	25.4				deg C	170.1
Turbidity, Field	1.6				NTU	180.1
Acetone	6.2	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	24		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.0		0.19	1.0	ug/L	8260B
Depth	7.95				Feet	Depth Field
Dissolved Oxygen, Field	0.50		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0041-025.0-20141124	Lab ID: J1409200-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2614				uMHOS/c	120.1
pH, Field	6.40				pH Units	150.1
Temperature, Field	26.43				deg C	170.1
Turbidity, Field	7.98				NTU	180.1
cis-1,2-Dichloroethene	11		0.36	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0041-025.0-20141124 **Lab ID: J1409200-011**

Analyte	Results	Flag	MDL	PQL	Units	Method
trans-1,2-Dichloroethene	0.74	I	0.19	1.0	ug/L	8260B
Depth	6.14				Feet	Depth Field
Dissolved Oxygen, Field	0.32		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0026-035.0-20141124 **Lab ID: J1409200-012**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	3280				uMHOS/c	120.1
pH, Field	6.76				pH Units	150.1
Temperature, Field	25.1				deg C	170.1
Turbidity, Field	1.7				NTU	180.1
cis-1,2-Dichloroethene	7.7		0.36	1.0	ug/L	8260B
Depth	8.76				Feet	Depth Field
Dissolved Oxygen, Field	0.41		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0042-035.0-20141124 **Lab ID: J1409200-013**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	2675				uMHOS/c	120.1
pH, Field	6.50				pH Units	150.1
Temperature, Field	25.93				deg C	170.1
Turbidity, Field	7.95				NTU	180.1
cis-1,2-Dichloroethene	52		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	7.5		0.36	1.0	ug/L	8260B
Depth	6.35				Feet	Depth Field
Dissolved Oxygen, Field	0.22		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0035-025.0-20141125 **Lab ID: J1409200-014**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	1901				uMHOS/c	120.1
pH, Field	6.52				pH Units	150.1
Temperature, Field	24.0				deg C	170.1
Turbidity, Field	2.3				NTU	180.1
cis-1,2-Dichloroethene	70		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.0		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	6.5		0.36	1.0	ug/L	8260B
Depth	3.45				Feet	Depth Field
Dissolved Oxygen, Field	1.2		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0023-025.0-20141125 **Lab ID: J1409200-015**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	2554				uMHOS/c	120.1
pH, Field	6.45				pH Units	150.1
Temperature, Field	24.87				deg C	170.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0023-025.0-20141125	Lab ID: J1409200-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Turbidity, Field	4.97				NTU	180.1
cis-1,2-Dichloroethene	5.7		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.37	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	4.4		0.36	1.0	ug/L	8260B
Depth	5.44				Feet	Depth Field
Dissolved Oxygen, Field	0.88		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0036-035.0-20141125	Lab ID: J1409200-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2650				uMHOS/c	120.1
pH, Field	6.90				pH Units	150.1
Temperature, Field	24.6				deg C	170.1
Turbidity, Field	3.2				NTU	180.1
cis-1,2-Dichloroethene	2.4		0.36	1.0	ug/L	8260B
Depth	3.12				Feet	Depth Field
Dissolved Oxygen, Field	1.1		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0024-035.0-20141125	Lab ID: J1409200-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2938				uMHOS/c	120.1
pH, Field	7.08				pH Units	150.1
Temperature, Field	25.83				deg C	170.1
Turbidity, Field	7.61				NTU	180.1
cis-1,2-Dichloroethene	0.37	I	0.36	1.0	ug/L	8260B
Depth	6.06				Feet	Depth Field
Dissolved Oxygen, Field	6.5		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0049-027.5-20141125	Lab ID: J1409200-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1553				uMHOS/c	120.1
pH, Field	6.68				pH Units	150.1
Temperature, Field	25.0				deg C	170.1
Turbidity, Field	2.6				NTU	180.1
cis-1,2-Dichloroethene	230		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	5.5		0.36	1.0	ug/L	8260B
Vinyl Chloride	0.40	I	0.36	1.0	ug/L	8260B
Depth	7.43				Feet	Depth Field
Dissolved Oxygen, Field	0.49		0.10	0.10	mg/L	SM 4500-O

Client: Levine Fricke
Project: NASA M505
Sample Matrix: Water

Service Request:J1409200
Date Received:11/26/14

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Nineteen water samples were received for analysis at ALS Environmental on 11/26/14. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

Method 8260B: The spike recoveries of several analytes for Laboratory Control Samples (LCS/DLCS) JQ1409447-01 and -02 were outside the control criterion. The analytes in question were not detected in the associated field samples. Since the analytes were detected in the MRL check standard, instrument sensitivity was documented. The data quality was not significantly affected and no further corrective action was taken.

Approved by _____ Date 12/18/2014

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	9/20/2016
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2011006	2/3/2015
North Carolina Department of Environment and Natural Resources	527	12/31/2015
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Virginia Environmental Accreditation Program	460191	12/14/2015

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1409200

Project: NASA M505

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1409200-001	M505-MW0013-025.5-20141124	11/24/2014	1403
J1409200-002	M505-MW0055-025.0-20141124	11/24/2014	1409
J1409200-003	M505-MW0052-010.0-20141124	11/24/2014	1440
J1409200-004	M505-MW0039-032.5-20141124	11/24/2014	1451
J1409200-005	M505-MW0051-025.0-20141124	11/24/2014	1513
J1409200-006	M505-MW0033-025.0-20141124	11/24/2014	1547
J1409200-007	M505-MW0040-025.0-20141124	11/24/2014	1552
J1409200-008	M505-MW0032-035.0-20141124	11/24/2014	1613
J1409200-009	M505-MW0044-027.5-20141124	11/24/2014	1616
J1409200-010	M505-MW0025-025.0-20141124	11/24/2014	1653
J1409200-011	M505-MW0041-025.0-20141124	11/24/2014	1656
J1409200-012	M505-MW0026-035.0-20141124	11/24/2014	1718
J1409200-013	M505-MW0042-035.0-20141124	11/24/2014	1735
J1409200-014	M505-MW0035-025.0-20141125	11/25/2014	1030
J1409200-015	M505-MW0023-025.0-20141125	11/25/2014	1031
J1409200-016	M505-MW0036-035.0-20141125	11/25/2014	1057
J1409200-017	M505-MW0024-035.0-20141125	11/25/2014	1106
J1409200-018	M505-MW0049-027.5-20141125	11/25/2014	1133
J1409200-019	Trip Blank	11/24/2014	0000

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:03
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0013-025.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 14:34	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 14:34	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 14:34	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 14:34	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 14:34	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 14:34	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 14:34	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 14:34	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 14:34	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 14:34	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 14:34	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 14:34	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 14:34	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 14:34	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 14:34	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 14:34	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 14:34	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 14:34	
Acetone	5.6 U	50	5.6	1	12/05/14 14:34	
Benzene	0.21 U	1.0	0.21	1	12/05/14 14:34	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 14:34	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 14:34	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 14:34	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 14:34	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 14:34	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 14:34	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 14:34	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 14:34	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 14:34	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 14:34	
cis-1,2-Dichloroethene	**2.3**	1.0	0.36	1	12/05/14 14:34	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 14:34	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 14:34	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 14:34	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 14:34	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 14:34	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 14:34	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 14:34	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 14:34	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 14:34	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 14:34	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 14:34	
Styrene	0.29 U	1.0	0.29	1	12/05/14 14:34	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:03
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0013-025.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 14:34	
Toluene	0.19 U	1.0	0.19	1	12/05/14 14:34	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/05/14 14:34	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 14:34	
Trichloroethene (TCE)	**4.5**	1.0	0.36	1	12/05/14 14:34	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 14:34	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 14:34	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 14:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	101	72 - 121	12/05/14 14:34	
4-Bromofluorobenzene	106	86 - 113	12/05/14 14:34	
Dibromofluoromethane	99	86 - 112	12/05/14 14:34	
Toluene-d8	103	88 - 115	12/05/14 14:34	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:03
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0013-025.5-20141124	**Basis:**	NA
Lab Code:	J1409200-001		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2338**	uMHOS/cm	-	-	1	11/24/14 14:03	
Depth	Depth Field	**6.38**	Feet	-	-	1	11/24/14 14:03	
Dissolved Oxygen, Field	SM 4500-O G	**2.6**	mg/L	0.10	0.10	1	11/24/14 14:03	
pH, Field	150.1	**6.74**	pH Units	-	-	1	11/24/14 14:03	
Temperature, Field	170.1	**28.20**	deg C	-	-	1	11/24/14 14:03	
Turbidity, Field	180.1	**0.99**	NTU	-	-	1	11/24/14 14:03	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:09
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0055-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 15:01	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 15:01	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 15:01	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 15:01	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 15:01	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 15:01	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 15:01	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 15:01	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 15:01	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 15:01	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 15:01	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 15:01	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 15:01	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 15:01	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 15:01	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 15:01	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 15:01	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 15:01	
Acetone	5.6 U	50	5.6	1	12/05/14 15:01	
Benzene	0.21 U	1.0	0.21	1	12/05/14 15:01	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 15:01	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 15:01	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 15:01	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 15:01	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 15:01	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 15:01	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 15:01	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 15:01	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 15:01	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 15:01	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	12/05/14 15:01	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 15:01	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 15:01	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 15:01	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 15:01	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 15:01	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 15:01	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 15:01	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 15:01	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 15:01	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 15:01	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 15:01	
Styrene	0.29 U	1.0	0.29	1	12/05/14 15:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:09
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0055-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 15:01	
Toluene	0.19 U	1.0	0.19	1	12/05/14 15:01	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/05/14 15:01	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 15:01	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 15:01	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 15:01	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 15:01	
Vinyl Chloride	**0.41 I**	1.0	0.36	1	12/05/14 15:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	12/05/14 15:01	
4-Bromofluorobenzene	103	86 - 113	12/05/14 15:01	
Dibromofluoromethane	100	86 - 112	12/05/14 15:01	
Toluene-d8	105	88 - 115	12/05/14 15:01	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:09
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0055-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-002		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1884**	uMHOS/cm	-	-	1	11/24/14 14:09	
Depth	Depth Field	**7.20**	Feet	-	-	1	11/24/14 14:09	
Dissolved Oxygen, Field	SM 4500-O G	**0.27**	mg/L	0.10	0.10	1	11/24/14 14:09	
pH, Field	150.1	**6.95**	pH Units	-	-	1	11/24/14 14:09	
Temperature, Field	170.1	**26.0**	deg C	-	-	1	11/24/14 14:09	
Turbidity, Field	180.1	**1.8**	NTU	-	-	1	11/24/14 14:09	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:40
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0052-010.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.38 U	2.0	0.38	2	12/05/14 15:28	
1,1,1-Trichloroethane (TCA)	0.34 U	2.0	0.34	2	12/05/14 15:28	
1,1,2,2-Tetrachloroethane	0.58 U	2.0	0.58	2	12/05/14 15:28	
1,1,2-Trichloroethane	0.80 U	2.0	0.80	2	12/05/14 15:28	
1,1-Dichloroethane (1,1-DCA)	0.60 U	2.0	0.60	2	12/05/14 15:28	
1,1-Dichloroethene (1,1-DCE)	0.32 U	2.0	0.32	2	12/05/14 15:28	
1,2,3-Trichlorobenzene	0.66 U	20	0.66	2	12/05/14 15:28	
1,2,4-Trichlorobenzene	0.68 U	20	0.68	2	12/05/14 15:28	
1,2-Dibromo-3-chloropropane (DBCP)	4.6 U	10	4.6	2	12/05/14 15:28	
1,2-Dibromoethane (EDB)	0.92 U	2.0	0.92	2	12/05/14 15:28	
1,2-Dichlorobenzene	0.96 U	2.0	0.96	2	12/05/14 15:28	
1,2-Dichloroethane	0.44 U	2.0	0.44	2	12/05/14 15:28	
1,2-Dichloropropane	0.38 U	2.0	0.38	2	12/05/14 15:28	
1,3-Dichlorobenzene	0.44 U	2.0	0.44	2	12/05/14 15:28	
1,4-Dichlorobenzene	0.32 U	2.0	0.32	2	12/05/14 15:28	
2-Butanone (MEK)	7.6 U	20	7.6	2	12/05/14 15:28	
2-Hexanone	4.4 U	50	4.4	2	12/05/14 15:28	
4-Methyl-2-pentanone (MIBK)	2.2 U	50	2.2	2	12/05/14 15:28	
Acetone	12 U	100	12	2	12/05/14 15:28	
Benzene	0.42 U	2.0	0.42	2	12/05/14 15:28	
Bromochloromethane	0.54 U	10	0.54	2	12/05/14 15:28	
Bromodichloromethane	0.44 U	2.0	0.44	2	12/05/14 15:28	
Bromoform	0.84 U	4.0	0.84	2	12/05/14 15:28	
Bromomethane	0.46 U	10	0.46	2	12/05/14 15:28	
Carbon Disulfide	4.8 U	20	4.8	2	12/05/14 15:28	
Carbon Tetrachloride	0.68 U	2.0	0.68	2	12/05/14 15:28	
Chlorobenzene	0.32 U	2.0	0.32	2	12/05/14 15:28	
Chloroethane	1.1 U	10	1.1	2	12/05/14 15:28	
Chloroform	0.70 U	2.0	0.70	2	12/05/14 15:28	
Chloromethane	0.72 U	2.0	0.72	2	12/05/14 15:28	
cis-1,2-Dichloroethene	**22**	2.0	0.72	2	12/05/14 15:28	
cis-1,3-Dichloropropene	0.40 U	2.0	0.40	2	12/05/14 15:28	
Cyclohexane	0.48 U	20	0.48	2	12/05/14 15:28	
Dibromochloromethane	0.42 U	2.0	0.42	2	12/05/14 15:28	
Dichlorodifluoromethane	0.46 U	40	0.46	2	12/05/14 15:28	
Ethylbenzene	0.42 U	2.0	0.42	2	12/05/14 15:28	
Isopropylbenzene	0.28 U	2.0	0.28	2	12/05/14 15:28	
m,p-Xylenes	0.62 U	4.0	0.62	2	12/05/14 15:28	
Methyl Acetate	1.7 U	20	1.7	2	12/05/14 15:28	
Methyl tert-Butyl Ether	0.48 U	4.0	0.48	2	12/05/14 15:28	
Methylene Chloride	0.42 U	10	0.42	2	12/05/14 15:28	
o-Xylene	0.28 U	2.0	0.28	2	12/05/14 15:28	
Styrene	0.58 U	2.0	0.58	2	12/05/14 15:28	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:40
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0052-010.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.44 U	2.0	0.44	2	12/05/14 15:28	
Toluene	0.38 U	2.0	0.38	2	12/05/14 15:28	
trans-1,2-Dichloroethene	**0.70 I**	2.0	0.38	2	12/05/14 15:28	
trans-1,3-Dichloropropene	0.46 U	2.0	0.46	2	12/05/14 15:28	
Trichloroethene (TCE)	0.72 U	2.0	0.72	2	12/05/14 15:28	
Trichlorofluoromethane	0.48 U	40	0.48	2	12/05/14 15:28	
Trichlorotrifluoroethane	0.56 U	40	0.56	2	12/05/14 15:28	
Vinyl Chloride	**2.2**	2.0	0.72	2	12/05/14 15:28	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	72 - 121	12/05/14 15:28	
4-Bromofluorobenzene	101	86 - 113	12/05/14 15:28	
Dibromofluoromethane	102	86 - 112	12/05/14 15:28	
Toluene-d8	105	88 - 115	12/05/14 15:28	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:40
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0052-010.0-20141124	**Basis:**	NA
Lab Code:	J1409200-003		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**328**	uMHOS/cm	-	-	1	11/24/14 14:40	
Depth	Depth Field	**7.10**	Feet	-	-	1	11/24/14 14:40	
Dissolved Oxygen, Field	SM 4500-O G	**0.45**	mg/L	0.10	0.10	1	11/24/14 14:40	
pH, Field	150.1	**5.29**	pH Units	-	-	1	11/24/14 14:40	
Temperature, Field	170.1	**27.5**	deg C	-	-	1	11/24/14 14:40	
Turbidity, Field	180.1	**12**	NTU	-	-	1	11/24/14 14:40	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:51
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0039-032.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 15:56	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 15:56	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 15:56	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 15:56	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 15:56	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 15:56	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 15:56	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 15:56	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 15:56	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 15:56	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 15:56	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 15:56	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 15:56	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 15:56	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 15:56	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 15:56	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 15:56	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 15:56	
Acetone	**10 I**	50	5.6	1	12/05/14 15:56	
Benzene	0.21 U	1.0	0.21	1	12/05/14 15:56	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 15:56	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 15:56	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 15:56	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 15:56	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 15:56	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 15:56	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 15:56	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 15:56	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 15:56	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 15:56	
cis-1,2-Dichloroethene	**20**	1.0	0.36	1	12/05/14 15:56	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 15:56	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 15:56	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 15:56	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 15:56	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 15:56	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 15:56	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 15:56	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 15:56	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 15:56	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 15:56	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 15:56	
Styrene	0.29 U	1.0	0.29	1	12/05/14 15:56	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:51
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0039-032.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 15:56	
Toluene	0.19 U	1.0	0.19	1	12/05/14 15:56	
trans-1,2-Dichloroethene	**0.78 I**	1.0	0.19	1	12/05/14 15:56	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 15:56	
Trichloroethene (TCE)	**6.5**	1.0	0.36	1	12/05/14 15:56	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 15:56	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 15:56	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 15:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	12/05/14 15:56	
4-Bromofluorobenzene	101	86 - 113	12/05/14 15:56	
Dibromofluoromethane	101	86 - 112	12/05/14 15:56	
Toluene-d8	104	88 - 115	12/05/14 15:56	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 14:51
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0039-032.5-20141124	**Basis:**	NA
Lab Code:	J1409200-004		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1478**	uMHOS/cm	-	-	1	11/24/14 14:51	
Depth	Depth Field	**5.58**	Feet	-	-	1	11/24/14 14:51	
Dissolved Oxygen, Field	SM 4500-O G	**3.8**	mg/L	0.10	0.10	1	11/24/14 14:51	
pH, Field	150.1	**6.69**	pH Units	-	-	1	11/24/14 14:51	
Temperature, Field	170.1	**29.17**	deg C	-	-	1	11/24/14 14:51	
Turbidity, Field	180.1	**0.55**	NTU	-	-	1	11/24/14 14:51	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0051-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 16:23	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 16:23	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 16:23	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 16:23	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 16:23	
1,1-Dichloroethene (1,1-DCE)	**0.63 I**	1.0	0.16	1	12/05/14 16:23	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 16:23	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 16:23	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 16:23	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 16:23	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 16:23	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 16:23	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 16:23	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 16:23	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 16:23	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 16:23	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 16:23	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 16:23	
Acetone	**6.6 I**	50	5.6	1	12/05/14 16:23	
Benzene	0.21 U	1.0	0.21	1	12/05/14 16:23	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 16:23	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 16:23	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 16:23	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 16:23	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 16:23	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 16:23	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 16:23	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 16:23	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 16:23	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 16:23	
cis-1,2-Dichloroethene	**88**	1.0	0.36	1	12/05/14 16:23	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 16:23	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 16:23	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 16:23	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 16:23	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 16:23	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 16:23	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 16:23	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 16:23	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 16:23	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 16:23	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 16:23	
Styrene	0.29 U	1.0	0.29	1	12/05/14 16:23	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0051-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 16:23	
Toluene	0.19 U	1.0	0.19	1	12/05/14 16:23	
trans-1,2-Dichloroethene	**1.0**	1.0	0.19	1	12/05/14 16:23	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 16:23	
Trichloroethene (TCE)	**9.9**	1.0	0.36	1	12/05/14 16:23	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 16:23	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 16:23	
Vinyl Chloride	**45**	1.0	0.36	1	12/05/14 16:23	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	12/05/14 16:23	
4-Bromofluorobenzene	105	86 - 113	12/05/14 16:23	
Dibromofluoromethane	101	86 - 112	12/05/14 16:23	
Toluene-d8	104	88 - 115	12/05/14 16:23	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0051-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-005		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1589**	uMHOS/cm	-	-	1	11/24/14 15:13	
Depth	Depth Field	**7.37**	Feet	-	-	1	11/24/14 15:13	
Dissolved Oxygen, Field	SM 4500-O G	**0.46**	mg/L	0.10	0.10	1	11/24/14 15:13	
pH, Field	150.1	**7.05**	pH Units	-	-	1	11/24/14 15:13	
Temperature, Field	170.1	**26.0**	deg C	-	-	1	11/24/14 15:13	
Turbidity, Field	180.1	**3.6**	NTU	-	-	1	11/24/14 15:13	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:47
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0033-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 16:50	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 16:50	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 16:50	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 16:50	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 16:50	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 16:50	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 16:50	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 16:50	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 16:50	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 16:50	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 16:50	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 16:50	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 16:50	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 16:50	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 16:50	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 16:50	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 16:50	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 16:50	
Acetone	5.6 U	50	5.6	1	12/05/14 16:50	
Benzene	0.21 U	1.0	0.21	1	12/05/14 16:50	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 16:50	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 16:50	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 16:50	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 16:50	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 16:50	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 16:50	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 16:50	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 16:50	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 16:50	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 16:50	
cis-1,2-Dichloroethene	**17**	1.0	0.36	1	12/05/14 16:50	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 16:50	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 16:50	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 16:50	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 16:50	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 16:50	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 16:50	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 16:50	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 16:50	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 16:50	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 16:50	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 16:50	
Styrene	0.29 U	1.0	0.29	1	12/05/14 16:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:47
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0033-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 16:50	
Toluene	0.19 U	1.0	0.19	1	12/05/14 16:50	
trans-1,2-Dichloroethene	**0.46 I**	1.0	0.19	1	12/05/14 16:50	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 16:50	
Trichloroethene (TCE)	**4.7**	1.0	0.36	1	12/05/14 16:50	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 16:50	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 16:50	
Vinyl Chloride	**0.62 I**	1.0	0.36	1	12/05/14 16:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	72 - 121	12/05/14 16:50	
4-Bromofluorobenzene	102	86 - 113	12/05/14 16:50	
Dibromofluoromethane	101	86 - 112	12/05/14 16:50	
Toluene-d8	104	88 - 115	12/05/14 16:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:47
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0033-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-006		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1905**	uMHOS/cm	-	-	1	11/24/14 15:47	
Depth	Depth Field	**8.03**	Feet	-	-	1	11/24/14 15:47	
Dissolved Oxygen, Field	SM 4500-O G	**0.99**	mg/L	0.10	0.10	1	11/24/14 15:47	
pH, Field	150.1	**6.71**	pH Units	-	-	1	11/24/14 15:47	
Temperature, Field	170.1	**26.2**	deg C	-	-	1	11/24/14 15:47	
Turbidity, Field	180.1	**2.8**	NTU	-	-	1	11/24/14 15:47	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:52
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0040-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 17:17	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 17:17	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 17:17	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 17:17	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 17:17	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 17:17	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 17:17	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 17:17	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 17:17	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 17:17	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 17:17	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 17:17	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 17:17	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 17:17	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 17:17	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 17:17	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 17:17	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 17:17	
Acetone	**5.9 I**	50	5.6	1	12/05/14 17:17	
Benzene	0.21 U	1.0	0.21	1	12/05/14 17:17	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 17:17	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 17:17	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 17:17	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 17:17	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 17:17	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 17:17	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 17:17	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 17:17	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 17:17	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 17:17	
cis-1,2-Dichloroethene	**6.1**	1.0	0.36	1	12/05/14 17:17	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 17:17	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 17:17	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 17:17	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 17:17	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 17:17	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 17:17	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 17:17	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 17:17	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 17:17	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 17:17	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 17:17	
Styrene	0.29 U	1.0	0.29	1	12/05/14 17:17	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:52
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0040-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 17:17	
Toluene	0.19 U	1.0	0.19	1	12/05/14 17:17	
trans-1,2-Dichloroethene	**0.21 I**	1.0	0.19	1	12/05/14 17:17	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 17:17	
Trichloroethene (TCE)	**5.0**	1.0	0.36	1	12/05/14 17:17	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 17:17	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 17:17	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 17:17	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	12/05/14 17:17	
4-Bromofluorobenzene	103	86 - 113	12/05/14 17:17	
Dibromofluoromethane	104	86 - 112	12/05/14 17:17	
Toluene-d8	103	88 - 115	12/05/14 17:17	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 15:52
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0040-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-007		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1464**	uMHOS/cm	-	-	1	11/24/14 15:52	
Depth	Depth Field	**5.80**	Feet	-	-	1	11/24/14 15:52	
Dissolved Oxygen, Field	SM 4500-O G	**0.37**	mg/L	0.10	0.10	1	11/24/14 15:52	
pH, Field	150.1	**6.71**	pH Units	-	-	1	11/24/14 15:52	
Temperature, Field	170.1	**28.72**	deg C	-	-	1	11/24/14 15:52	
Turbidity, Field	180.1	**0.63**	NTU	-	-	1	11/24/14 15:52	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0032-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 17:44	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 17:44	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 17:44	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 17:44	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 17:44	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 17:44	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 17:44	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 17:44	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 17:44	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 17:44	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 17:44	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 17:44	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 17:44	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 17:44	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 17:44	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 17:44	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 17:44	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 17:44	
Acetone	**8.0 I**	50	5.6	1	12/05/14 17:44	
Benzene	0.21 U	1.0	0.21	1	12/05/14 17:44	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 17:44	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 17:44	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 17:44	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 17:44	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 17:44	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 17:44	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 17:44	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 17:44	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 17:44	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 17:44	
cis-1,2-Dichloroethene	**220**	1.0	0.36	1	12/05/14 17:44	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 17:44	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 17:44	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 17:44	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 17:44	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 17:44	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 17:44	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 17:44	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 17:44	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 17:44	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 17:44	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 17:44	
Styrene	0.29 U	1.0	0.29	1	12/05/14 17:44	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0032-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 17:44	
Toluene	0.19 U	1.0	0.19	1	12/05/14 17:44	
trans-1,2-Dichloroethene	**0.78 I**	1.0	0.19	1	12/05/14 17:44	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 17:44	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 17:44	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 17:44	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 17:44	
Vinyl Chloride	**25**	1.0	0.36	1	12/05/14 17:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	72 - 121	12/05/14 17:44	
4-Bromofluorobenzene	105	86 - 113	12/05/14 17:44	
Dibromofluoromethane	104	86 - 112	12/05/14 17:44	
Toluene-d8	104	88 - 115	12/05/14 17:44	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:13
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0032-035.0-20141124	**Basis:**	NA
Lab Code:	J1409200-008		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1753**	uMHOS/cm	-	-	1	11/24/14 16:13	
Depth	Depth Field	**8.58**	Feet	-	-	1	11/24/14 16:13	
Dissolved Oxygen, Field	SM 4500-O G	**0.73**	mg/L	0.10	0.10	1	11/24/14 16:13	
pH, Field	150.1	**6.81**	pH Units	-	-	1	11/24/14 16:13	
Temperature, Field	170.1	**26.0**	deg C	-	-	1	11/24/14 16:13	
Turbidity, Field	180.1	**3.5**	NTU	-	-	1	11/24/14 16:13	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:16
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0044-027.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 18:11	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 18:11	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 18:11	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 18:11	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 18:11	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 18:11	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 18:11	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 18:11	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 18:11	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 18:11	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 18:11	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 18:11	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 18:11	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 18:11	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 18:11	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 18:11	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 18:11	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 18:11	
Acetone	**6.2 I**	50	5.6	1	12/05/14 18:11	
Benzene	0.21 U	1.0	0.21	1	12/05/14 18:11	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 18:11	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 18:11	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 18:11	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 18:11	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 18:11	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 18:11	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 18:11	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 18:11	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 18:11	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 18:11	
cis-1,2-Dichloroethene	**2.2**	1.0	0.36	1	12/05/14 18:11	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 18:11	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 18:11	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 18:11	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 18:11	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 18:11	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 18:11	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 18:11	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 18:11	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 18:11	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 18:11	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 18:11	
Styrene	0.29 U	1.0	0.29	1	12/05/14 18:11	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:16
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0044-027.5-20141124	**Units:**	ug/L
Lab Code:	J1409200-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 18:11	
Toluene	0.19 U	1.0	0.19	1	12/05/14 18:11	
trans-1,2-Dichloroethene	**0.20 I**	1.0	0.19	1	12/05/14 18:11	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 18:11	
Trichloroethene (TCE)	**4.5**	1.0	0.36	1	12/05/14 18:11	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 18:11	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 18:11	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 18:11	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	12/05/14 18:11	
4-Bromofluorobenzene	107	86 - 113	12/05/14 18:11	
Dibromofluoromethane	102	86 - 112	12/05/14 18:11	
Toluene-d8	105	88 - 115	12/05/14 18:11	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:16
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0044-027.5-20141124	**Basis:**	NA
Lab Code:	J1409200-009		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2465**	uMHOS/cm	-	-	1	11/24/14 16:16	
Depth	Depth Field	**5.27**	Feet	-	-	1	11/24/14 16:16	
Dissolved Oxygen, Field	SM 4500-O G	**0.92**	mg/L	0.10	0.10	1	11/24/14 16:16	
pH, Field	150.1	**6.65**	pH Units	-	-	1	11/24/14 16:16	
Temperature, Field	170.1	**27.46**	deg C	-	-	1	11/24/14 16:16	
Turbidity, Field	180.1	**2.86**	NTU	-	-	1	11/24/14 16:16	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:53
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0025-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 18:39	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 18:39	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 18:39	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 18:39	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 18:39	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 18:39	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 18:39	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 18:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 18:39	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 18:39	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 18:39	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 18:39	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 18:39	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 18:39	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 18:39	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 18:39	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 18:39	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 18:39	
Acetone	**6.2 I**	50	5.6	1	12/05/14 18:39	
Benzene	0.21 U	1.0	0.21	1	12/05/14 18:39	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 18:39	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 18:39	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 18:39	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 18:39	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 18:39	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 18:39	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 18:39	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 18:39	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 18:39	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 18:39	
cis-1,2-Dichloroethene	**24**	1.0	0.36	1	12/05/14 18:39	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 18:39	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 18:39	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 18:39	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 18:39	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 18:39	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 18:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 18:39	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 18:39	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 18:39	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 18:39	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 18:39	
Styrene	0.29 U	1.0	0.29	1	12/05/14 18:39	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:53
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0025-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 18:39	
Toluene	0.19 U	1.0	0.19	1	12/05/14 18:39	
trans-1,2-Dichloroethene	**1.0**	1.0	0.19	1	12/05/14 18:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 18:39	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 18:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 18:39	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 18:39	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 18:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	12/05/14 18:39	
4-Bromofluorobenzene	105	86 - 113	12/05/14 18:39	
Dibromofluoromethane	100	86 - 112	12/05/14 18:39	
Toluene-d8	106	88 - 115	12/05/14 18:39	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:53
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0025-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-010		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**3130**	uMHOS/cm	-	-	1	11/24/14 16:53	
Depth	Depth Field	**7.95**	Feet	-	-	1	11/24/14 16:53	
Dissolved Oxygen, Field	SM 4500-O G	**0.50**	mg/L	0.10	0.10	1	11/24/14 16:53	
pH, Field	150.1	**6.63**	pH Units	-	-	1	11/24/14 16:53	
Temperature, Field	170.1	**25.4**	deg C	-	-	1	11/24/14 16:53	
Turbidity, Field	180.1	**1.6**	NTU	-	-	1	11/24/14 16:53	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:56
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0041-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 19:06	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 19:06	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 19:06	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 19:06	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 19:06	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 19:06	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 19:06	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 19:06	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 19:06	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 19:06	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 19:06	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 19:06	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 19:06	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 19:06	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:06	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 19:06	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 19:06	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 19:06	
Acetone	5.6 U	50	5.6	1	12/05/14 19:06	
Benzene	0.21 U	1.0	0.21	1	12/05/14 19:06	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 19:06	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 19:06	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 19:06	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 19:06	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 19:06	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 19:06	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:06	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 19:06	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 19:06	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 19:06	
cis-1,2-Dichloroethene	**11**	1.0	0.36	1	12/05/14 19:06	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 19:06	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 19:06	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 19:06	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 19:06	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 19:06	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 19:06	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 19:06	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 19:06	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 19:06	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 19:06	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 19:06	
Styrene	0.29 U	1.0	0.29	1	12/05/14 19:06	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:56
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0041-025.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 19:06	
Toluene	0.19 U	1.0	0.19	1	12/05/14 19:06	
trans-1,2-Dichloroethene	**0.74 I**	1.0	0.19	1	12/05/14 19:06	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 19:06	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 19:06	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 19:06	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 19:06	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 19:06	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	12/05/14 19:06	
4-Bromofluorobenzene	108	86 - 113	12/05/14 19:06	
Dibromofluoromethane	102	86 - 112	12/05/14 19:06	
Toluene-d8	103	88 - 115	12/05/14 19:06	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 16:56
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0041-025.0-20141124	**Basis:**	NA
Lab Code:	J1409200-011		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2614**	uMHOS/cm	-	-	1	11/24/14 16:56	
Depth	Depth Field	**6.14**	Feet	-	-	1	11/24/14 16:56	
Dissolved Oxygen, Field	SM 4500-O G	**0.32**	mg/L	0.10	0.10	1	11/24/14 16:56	
pH, Field	150.1	**6.40**	pH Units	-	-	1	11/24/14 16:56	
Temperature, Field	170.1	**26.43**	deg C	-	-	1	11/24/14 16:56	
Turbidity, Field	180.1	**7.98**	NTU	-	-	1	11/24/14 16:56	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:18
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0026-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 19:32	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 19:32	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 19:32	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 19:32	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 19:32	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 19:32	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 19:32	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 19:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 19:32	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 19:32	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 19:32	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 19:32	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 19:32	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 19:32	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:32	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 19:32	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 19:32	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 19:32	
Acetone	5.6 U	50	5.6	1	12/05/14 19:32	
Benzene	0.21 U	1.0	0.21	1	12/05/14 19:32	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 19:32	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 19:32	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 19:32	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 19:32	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 19:32	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 19:32	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:32	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 19:32	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 19:32	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 19:32	
cis-1,2-Dichloroethene	**7.7**	1.0	0.36	1	12/05/14 19:32	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 19:32	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 19:32	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 19:32	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 19:32	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 19:32	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 19:32	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 19:32	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 19:32	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 19:32	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 19:32	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 19:32	
Styrene	0.29 U	1.0	0.29	1	12/05/14 19:32	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:18
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0026-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 19:32	
Toluene	0.19 U	1.0	0.19	1	12/05/14 19:32	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/05/14 19:32	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 19:32	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 19:32	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 19:32	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 19:32	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 19:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	12/05/14 19:32	
4-Bromofluorobenzene	104	86 - 113	12/05/14 19:32	
Dibromofluoromethane	99	86 - 112	12/05/14 19:32	
Toluene-d8	103	88 - 115	12/05/14 19:32	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:18
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0026-035.0-20141124	**Basis:**	NA
Lab Code:	J1409200-012		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**3280**	uMHOS/cm	-	-	1	11/24/14 17:18	
Depth	Depth Field	**8.76**	Feet	-	-	1	11/24/14 17:18	
Dissolved Oxygen, Field	SM 4500-O G	**0.41**	mg/L	0.10	0.10	1	11/24/14 17:18	
pH, Field	150.1	**6.76**	pH Units	-	-	1	11/24/14 17:18	
Temperature, Field	170.1	**25.1**	deg C	-	-	1	11/24/14 17:18	
Turbidity, Field	180.1	**1.7**	NTU	-	-	1	11/24/14 17:18	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:35
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0042-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 19:59	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 19:59	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 19:59	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 19:59	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 19:59	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 19:59	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 19:59	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 19:59	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 19:59	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 19:59	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 19:59	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 19:59	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 19:59	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 19:59	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:59	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 19:59	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 19:59	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 19:59	
Acetone	5.6 U	50	5.6	1	12/05/14 19:59	
Benzene	0.21 U	1.0	0.21	1	12/05/14 19:59	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 19:59	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 19:59	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 19:59	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 19:59	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 19:59	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 19:59	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 19:59	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 19:59	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 19:59	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 19:59	
cis-1,2-Dichloroethene	**52**	1.0	0.36	1	12/05/14 19:59	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 19:59	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 19:59	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 19:59	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 19:59	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 19:59	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 19:59	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 19:59	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 19:59	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 19:59	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 19:59	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 19:59	
Styrene	0.29 U	1.0	0.29	1	12/05/14 19:59	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:35
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0042-035.0-20141124	**Units:**	ug/L
Lab Code:	J1409200-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 19:59	
Toluene	0.19 U	1.0	0.19	1	12/05/14 19:59	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	12/05/14 19:59	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 19:59	
Trichloroethene (TCE)	**7.5**	1.0	0.36	1	12/05/14 19:59	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 19:59	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 19:59	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 19:59	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	12/05/14 19:59	
4-Bromofluorobenzene	109	86 - 113	12/05/14 19:59	
Dibromofluoromethane	102	86 - 112	12/05/14 19:59	
Toluene-d8	103	88 - 115	12/05/14 19:59	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 17:35
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0042-035.0-20141124	**Basis:**	NA
Lab Code:	J1409200-013		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2675**	uMHOS/cm	-	-	1	11/24/14 17:35	
Depth	Depth Field	**6.35**	Feet	-	-	1	11/24/14 17:35	
Dissolved Oxygen, Field	SM 4500-O G	**0.22**	mg/L	0.10	0.10	1	11/24/14 17:35	
pH, Field	150.1	**6.50**	pH Units	-	-	1	11/24/14 17:35	
Temperature, Field	170.1	**25.93**	deg C	-	-	1	11/24/14 17:35	
Turbidity, Field	180.1	**7.95**	NTU	-	-	1	11/24/14 17:35	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:30
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0035-025.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 20:27	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 20:27	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 20:27	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 20:27	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 20:27	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 20:27	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 20:27	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 20:27	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 20:27	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 20:27	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 20:27	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 20:27	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 20:27	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 20:27	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 20:27	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 20:27	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 20:27	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 20:27	
Acetone	5.6 U	50	5.6	1	12/05/14 20:27	
Benzene	0.21 U	1.0	0.21	1	12/05/14 20:27	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 20:27	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 20:27	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 20:27	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 20:27	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 20:27	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 20:27	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 20:27	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 20:27	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 20:27	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 20:27	
cis-1,2-Dichloroethene	**70**	1.0	0.36	1	12/05/14 20:27	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 20:27	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 20:27	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 20:27	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 20:27	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 20:27	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 20:27	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 20:27	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 20:27	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 20:27	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 20:27	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 20:27	
Styrene	0.29 U	1.0	0.29	1	12/05/14 20:27	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:30
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0035-025.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 20:27	
Toluene	0.19 U	1.0	0.19	1	12/05/14 20:27	
trans-1,2-Dichloroethene	**1.0**	1.0	0.19	1	12/05/14 20:27	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 20:27	
Trichloroethene (TCE)	**6.5**	1.0	0.36	1	12/05/14 20:27	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 20:27	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 20:27	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 20:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	12/05/14 20:27	
4-Bromofluorobenzene	105	86 - 113	12/05/14 20:27	
Dibromofluoromethane	98	86 - 112	12/05/14 20:27	
Toluene-d8	102	88 - 115	12/05/14 20:27	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:30
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0035-025.0-20141125	**Basis:**	NA
Lab Code:	J1409200-014		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1901**	uMHOS/cm	-	-	1	11/25/14 10:30	
Depth	Depth Field	**3.45**	Feet	-	-	1	11/25/14 10:30	
Dissolved Oxygen, Field	SM 4500-O G	**1.2**	mg/L	0.10	0.10	1	11/25/14 10:30	
pH, Field	150.1	**6.52**	pH Units	-	-	1	11/25/14 10:30	
Temperature, Field	170.1	**24.0**	deg C	-	-	1	11/25/14 10:30	
Turbidity, Field	180.1	**2.3**	NTU	-	-	1	11/25/14 10:30	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:31
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0023-025.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 20:54	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 20:54	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 20:54	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 20:54	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 20:54	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 20:54	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 20:54	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 20:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 20:54	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 20:54	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 20:54	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 20:54	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 20:54	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 20:54	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 20:54	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 20:54	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 20:54	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 20:54	
Acetone	5.6 U	50	5.6	1	12/05/14 20:54	
Benzene	0.21 U	1.0	0.21	1	12/05/14 20:54	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 20:54	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 20:54	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 20:54	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 20:54	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 20:54	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 20:54	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 20:54	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 20:54	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 20:54	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 20:54	
cis-1,2-Dichloroethene	**5.7**	1.0	0.36	1	12/05/14 20:54	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 20:54	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 20:54	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 20:54	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 20:54	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 20:54	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 20:54	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 20:54	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 20:54	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 20:54	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 20:54	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 20:54	
Styrene	0.29 U	1.0	0.29	1	12/05/14 20:54	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:31
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0023-025.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 20:54	
Toluene	0.19 U	1.0	0.19	1	12/05/14 20:54	
trans-1,2-Dichloroethene	**0.37 I**	1.0	0.19	1	12/05/14 20:54	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 20:54	
Trichloroethene (TCE)	**4.4**	1.0	0.36	1	12/05/14 20:54	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 20:54	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 20:54	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 20:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	12/05/14 20:54	
4-Bromofluorobenzene	106	86 - 113	12/05/14 20:54	
Dibromofluoromethane	97	86 - 112	12/05/14 20:54	
Toluene-d8	103	88 - 115	12/05/14 20:54	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:31
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0023-025.0-20141125	**Basis:**	NA
Lab Code:	J1409200-015		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2554**	uMHOS/cm	-	-	1	11/25/14 10:31	
Depth	Depth Field	**5.44**	Feet	-	-	1	11/25/14 10:31	
Dissolved Oxygen, Field	SM 4500-O G	**0.88**	mg/L	0.10	0.10	1	11/25/14 10:31	
pH, Field	150.1	**6.45**	pH Units	-	-	1	11/25/14 10:31	
Temperature, Field	170.1	**24.87**	deg C	-	-	1	11/25/14 10:31	
Turbidity, Field	180.1	**4.97**	NTU	-	-	1	11/25/14 10:31	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:57
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0036-035.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/06/14 01:55	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/06/14 01:55	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/06/14 01:55	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/06/14 01:55	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/06/14 01:55	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/06/14 01:55	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/06/14 01:55	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/06/14 01:55	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/06/14 01:55	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/06/14 01:55	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/06/14 01:55	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/06/14 01:55	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/06/14 01:55	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/06/14 01:55	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:55	*
2-Butanone (MEK)	3.8 U	10	3.8	1	12/06/14 01:55	
2-Hexanone	2.2 U	25	2.2	1	12/06/14 01:55	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/06/14 01:55	*
Acetone	5.6 U	50	5.6	1	12/06/14 01:55	
Benzene	0.21 U	1.0	0.21	1	12/06/14 01:55	
Bromochloromethane	0.27 U	5.0	0.27	1	12/06/14 01:55	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/06/14 01:55	
Bromoform	0.42 U	2.0	0.42	1	12/06/14 01:55	
Bromomethane	0.23 U	5.0	0.23	1	12/06/14 01:55	
Carbon Disulfide	2.4 U	10	2.4	1	12/06/14 01:55	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/06/14 01:55	
Chlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:55	
Chloroethane	0.52 U	5.0	0.52	1	12/06/14 01:55	
Chloroform	0.35 U	1.0	0.35	1	12/06/14 01:55	
Chloromethane	0.36 U	1.0	0.36	1	12/06/14 01:55	
cis-1,2-Dichloroethene	**2.4**	1.0	0.36	1	12/06/14 01:55	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/06/14 01:55	
Cyclohexane	0.24 U	10	0.24	1	12/06/14 01:55	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/06/14 01:55	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/06/14 01:55	
Ethylbenzene	0.21 U	1.0	0.21	1	12/06/14 01:55	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/06/14 01:55	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/06/14 01:55	*
Methyl Acetate	0.84 U	10	0.84	1	12/06/14 01:55	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/06/14 01:55	
Methylene Chloride	0.21 U	5.0	0.21	1	12/06/14 01:55	
o-Xylene	0.14 U	1.0	0.14	1	12/06/14 01:55	
Styrene	0.29 U	1.0	0.29	1	12/06/14 01:55	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:57
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0036-035.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/06/14 01:55	
Toluene	0.19 U	1.0	0.19	1	12/06/14 01:55	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/06/14 01:55	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/06/14 01:55	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/06/14 01:55	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/06/14 01:55	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/06/14 01:55	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/06/14 01:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	12/06/14 01:55	
4-Bromofluorobenzene	107	86 - 113	12/06/14 01:55	
Dibromofluoromethane	101	86 - 112	12/06/14 01:55	
Toluene-d8	101	88 - 115	12/06/14 01:55	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 10:57
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0036-035.0-20141125	**Basis:**	NA
Lab Code:	J1409200-016		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2650**	uMHOS/cm	-	-	1	11/25/14 10:57	
Depth	Depth Field	**3.12**	Feet	-	-	1	11/25/14 10:57	
Dissolved Oxygen, Field	SM 4500-O G	**1.1**	mg/L	0.10	0.10	1	11/25/14 10:57	
pH, Field	150.1	**6.90**	pH Units	-	-	1	11/25/14 10:57	
Temperature, Field	170.1	**24.6**	deg C	-	-	1	11/25/14 10:57	
Turbidity, Field	180.1	**3.2**	NTU	-	-	1	11/25/14 10:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:06
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0024-035.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/06/14 02:22	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/06/14 02:22	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/06/14 02:22	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/06/14 02:22	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/06/14 02:22	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/06/14 02:22	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/06/14 02:22	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/06/14 02:22	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/06/14 02:22	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/06/14 02:22	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/06/14 02:22	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/06/14 02:22	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/06/14 02:22	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/06/14 02:22	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/06/14 02:22	*
2-Butanone (MEK)	3.8 U	10	3.8	1	12/06/14 02:22	
2-Hexanone	2.2 U	25	2.2	1	12/06/14 02:22	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/06/14 02:22	*
Acetone	5.6 U	50	5.6	1	12/06/14 02:22	
Benzene	0.21 U	1.0	0.21	1	12/06/14 02:22	
Bromochloromethane	0.27 U	5.0	0.27	1	12/06/14 02:22	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/06/14 02:22	
Bromoform	0.42 U	2.0	0.42	1	12/06/14 02:22	
Bromomethane	0.23 U	5.0	0.23	1	12/06/14 02:22	
Carbon Disulfide	2.4 U	10	2.4	1	12/06/14 02:22	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/06/14 02:22	
Chlorobenzene	0.16 U	1.0	0.16	1	12/06/14 02:22	
Chloroethane	0.52 U	5.0	0.52	1	12/06/14 02:22	
Chloroform	0.35 U	1.0	0.35	1	12/06/14 02:22	
Chloromethane	0.36 U	1.0	0.36	1	12/06/14 02:22	
cis-1,2-Dichloroethene	**0.37 I**	1.0	0.36	1	12/06/14 02:22	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/06/14 02:22	
Cyclohexane	0.24 U	10	0.24	1	12/06/14 02:22	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/06/14 02:22	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/06/14 02:22	
Ethylbenzene	0.21 U	1.0	0.21	1	12/06/14 02:22	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/06/14 02:22	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/06/14 02:22	*
Methyl Acetate	0.84 U	10	0.84	1	12/06/14 02:22	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/06/14 02:22	
Methylene Chloride	0.21 U	5.0	0.21	1	12/06/14 02:22	
o-Xylene	0.14 U	1.0	0.14	1	12/06/14 02:22	
Styrene	0.29 U	1.0	0.29	1	12/06/14 02:22	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:06
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0024-035.0-20141125	**Units:**	ug/L
Lab Code:	J1409200-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/06/14 02:22	
Toluene	0.19 U	1.0	0.19	1	12/06/14 02:22	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/06/14 02:22	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/06/14 02:22	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/06/14 02:22	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/06/14 02:22	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/06/14 02:22	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/06/14 02:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	12/06/14 02:22	
4-Bromofluorobenzene	107	86 - 113	12/06/14 02:22	
Dibromofluoromethane	98	86 - 112	12/06/14 02:22	
Toluene-d8	100	88 - 115	12/06/14 02:22	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:06
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0024-035.0-20141125	**Basis:**	NA
Lab Code:	J1409200-017		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**2938**	uMHOS/cm	-	-	1	11/25/14 11:06	
Depth	Depth Field	**6.06**	Feet	-	-	1	11/25/14 11:06	
Dissolved Oxygen, Field	SM 4500-O G	**6.5**	mg/L	0.10	0.10	1	11/25/14 11:06	
pH, Field	150.1	**7.08**	pH Units	-	-	1	11/25/14 11:06	
Temperature, Field	170.1	**25.83**	deg C	-	-	1	11/25/14 11:06	
Turbidity, Field	180.1	**7.61**	NTU	-	-	1	11/25/14 11:06	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:33
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0049-027.5-20141125	**Units:**	ug/L
Lab Code:	J1409200-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/06/14 02:50	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/06/14 02:50	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/06/14 02:50	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/06/14 02:50	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/06/14 02:50	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/06/14 02:50	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/06/14 02:50	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/06/14 02:50	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/06/14 02:50	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/06/14 02:50	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/06/14 02:50	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/06/14 02:50	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/06/14 02:50	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/06/14 02:50	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/06/14 02:50	*
2-Butanone (MEK)	3.8 U	10	3.8	1	12/06/14 02:50	
2-Hexanone	2.2 U	25	2.2	1	12/06/14 02:50	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/06/14 02:50	*
Acetone	5.6 U	50	5.6	1	12/06/14 02:50	
Benzene	0.21 U	1.0	0.21	1	12/06/14 02:50	
Bromochloromethane	0.27 U	5.0	0.27	1	12/06/14 02:50	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/06/14 02:50	
Bromoform	0.42 U	2.0	0.42	1	12/06/14 02:50	
Bromomethane	0.23 U	5.0	0.23	1	12/06/14 02:50	
Carbon Disulfide	2.4 U	10	2.4	1	12/06/14 02:50	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/06/14 02:50	
Chlorobenzene	0.16 U	1.0	0.16	1	12/06/14 02:50	
Chloroethane	0.52 U	5.0	0.52	1	12/06/14 02:50	
Chloroform	0.35 U	1.0	0.35	1	12/06/14 02:50	
Chloromethane	0.36 U	1.0	0.36	1	12/06/14 02:50	
cis-1,2-Dichloroethene	**230**	1.0	0.36	1	12/06/14 02:50	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/06/14 02:50	
Cyclohexane	0.24 U	10	0.24	1	12/06/14 02:50	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/06/14 02:50	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/06/14 02:50	
Ethylbenzene	0.21 U	1.0	0.21	1	12/06/14 02:50	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/06/14 02:50	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/06/14 02:50	*
Methyl Acetate	0.84 U	10	0.84	1	12/06/14 02:50	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/06/14 02:50	
Methylene Chloride	0.21 U	5.0	0.21	1	12/06/14 02:50	
o-Xylene	0.14 U	1.0	0.14	1	12/06/14 02:50	
Styrene	0.29 U	1.0	0.29	1	12/06/14 02:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:33
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0049-027.5-20141125	**Units:**	ug/L
Lab Code:	J1409200-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/06/14 02:50	
Toluene	0.19 U	1.0	0.19	1	12/06/14 02:50	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	12/06/14 02:50	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/06/14 02:50	
Trichloroethene (TCE)	**5.5**	1.0	0.36	1	12/06/14 02:50	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/06/14 02:50	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/06/14 02:50	
Vinyl Chloride	**0.40 I**	1.0	0.36	1	12/06/14 02:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	115	72 - 121	12/06/14 02:50	
4-Bromofluorobenzene	107	86 - 113	12/06/14 02:50	
Dibromofluoromethane	105	86 - 112	12/06/14 02:50	
Toluene-d8	100	88 - 115	12/06/14 02:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/25/14 11:33
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	M505-MW0049-027.5-20141125	**Basis:**	NA
Lab Code:	J1409200-018		

General Chemistry Parameters

Analyte Name	Analysis Method	Result	Units	PQL	MDL	Dil.	Date Analyzed	Q
Conductivity, Field	120.1	**1553**	uMHOS/cm	-	-	1	11/25/14 11:33	
Depth	Depth Field	**7.43**	Feet	-	-	1	11/25/14 11:33	
Dissolved Oxygen, Field	SM 4500-O G	**0.49**	mg/L	0.10	0.10	1	11/25/14 11:33	
pH, Field	150.1	**6.68**	pH Units	-	-	1	11/25/14 11:33	
Temperature, Field	170.1	**25.0**	deg C	-	-	1	11/25/14 11:33	
Turbidity, Field	180.1	**2.6**	NTU	-	-	1	11/25/14 11:33	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 00:00
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1409200-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/06/14 01:27	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/06/14 01:27	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/06/14 01:27	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/06/14 01:27	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/06/14 01:27	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/06/14 01:27	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/06/14 01:27	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/06/14 01:27	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/06/14 01:27	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/06/14 01:27	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/06/14 01:27	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/06/14 01:27	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/06/14 01:27	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/06/14 01:27	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:27	*
2-Butanone (MEK)	3.8 U	10	3.8	1	12/06/14 01:27	
2-Hexanone	2.2 U	25	2.2	1	12/06/14 01:27	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/06/14 01:27	*
Acetone	5.6 U	50	5.6	1	12/06/14 01:27	
Benzene	0.21 U	1.0	0.21	1	12/06/14 01:27	
Bromochloromethane	0.27 U	5.0	0.27	1	12/06/14 01:27	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/06/14 01:27	
Bromoform	0.42 U	2.0	0.42	1	12/06/14 01:27	
Bromomethane	0.23 U	5.0	0.23	1	12/06/14 01:27	
Carbon Disulfide	2.4 U	10	2.4	1	12/06/14 01:27	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/06/14 01:27	
Chlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:27	
Chloroethane	0.52 U	5.0	0.52	1	12/06/14 01:27	
Chloroform	0.35 U	1.0	0.35	1	12/06/14 01:27	
Chloromethane	0.36 U	1.0	0.36	1	12/06/14 01:27	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	12/06/14 01:27	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/06/14 01:27	
Cyclohexane	0.24 U	10	0.24	1	12/06/14 01:27	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/06/14 01:27	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/06/14 01:27	
Ethylbenzene	0.21 U	1.0	0.21	1	12/06/14 01:27	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/06/14 01:27	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/06/14 01:27	*
Methyl Acetate	0.84 U	10	0.84	1	12/06/14 01:27	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/06/14 01:27	
Methylene Chloride	0.21 U	5.0	0.21	1	12/06/14 01:27	
o-Xylene	0.14 U	1.0	0.14	1	12/06/14 01:27	
Styrene	0.29 U	1.0	0.29	1	12/06/14 01:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	11/24/14 00:00
Sample Matrix:	Water	**Date Received:**	11/26/14 09:30
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1409200-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/06/14 01:27	
Toluene	0.19 U	1.0	0.19	1	12/06/14 01:27	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/06/14 01:27	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/06/14 01:27	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/06/14 01:27	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/06/14 01:27	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/06/14 01:27	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/06/14 01:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	108	72 - 121	12/06/14 01:27	
4-Bromofluorobenzene	105	86 - 113	12/06/14 01:27	
Dibromofluoromethane	102	86 - 112	12/06/14 01:27	
Toluene-d8	100	88 - 115	12/06/14 01:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1409444-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/05/14 11:50	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/05/14 11:50	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/05/14 11:50	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/05/14 11:50	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/05/14 11:50	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/05/14 11:50	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/05/14 11:50	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/05/14 11:50	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/05/14 11:50	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/05/14 11:50	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/05/14 11:50	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/05/14 11:50	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/05/14 11:50	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/05/14 11:50	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/05/14 11:50	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/05/14 11:50	
2-Hexanone	2.2 U	25	2.2	1	12/05/14 11:50	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/05/14 11:50	
Acetone	5.6 U	50	5.6	1	12/05/14 11:50	
Benzene	0.21 U	1.0	0.21	1	12/05/14 11:50	
Bromochloromethane	0.27 U	5.0	0.27	1	12/05/14 11:50	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/05/14 11:50	
Bromoform	0.42 U	2.0	0.42	1	12/05/14 11:50	
Bromomethane	0.23 U	5.0	0.23	1	12/05/14 11:50	
Carbon Disulfide	2.4 U	10	2.4	1	12/05/14 11:50	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/05/14 11:50	
Chlorobenzene	0.16 U	1.0	0.16	1	12/05/14 11:50	
Chloroethane	0.52 U	5.0	0.52	1	12/05/14 11:50	
Chloroform	0.35 U	1.0	0.35	1	12/05/14 11:50	
Chloromethane	0.36 U	1.0	0.36	1	12/05/14 11:50	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	12/05/14 11:50	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/05/14 11:50	
Cyclohexane	0.24 U	10	0.24	1	12/05/14 11:50	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/05/14 11:50	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/05/14 11:50	
Ethylbenzene	0.21 U	1.0	0.21	1	12/05/14 11:50	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/05/14 11:50	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/05/14 11:50	
Methyl Acetate	0.84 U	10	0.84	1	12/05/14 11:50	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/05/14 11:50	
Methylene Chloride	0.21 U	5.0	0.21	1	12/05/14 11:50	
o-Xylene	0.14 U	1.0	0.14	1	12/05/14 11:50	
Styrene	0.29 U	1.0	0.29	1	12/05/14 11:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1409444-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/05/14 11:50	
Toluene	0.19 U	1.0	0.19	1	12/05/14 11:50	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/05/14 11:50	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/05/14 11:50	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/05/14 11:50	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/05/14 11:50	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/05/14 11:50	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/05/14 11:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	102	72 - 121	12/05/14 11:50	
4-Bromofluorobenzene	105	86 - 113	12/05/14 11:50	
Dibromofluoromethane	101	86 - 112	12/05/14 11:50	
Toluene-d8	103	88 - 115	12/05/14 11:50	

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1409447-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	12/06/14 01:00	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	12/06/14 01:00	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	12/06/14 01:00	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	12/06/14 01:00	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	12/06/14 01:00	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	12/06/14 01:00	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	12/06/14 01:00	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	12/06/14 01:00	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	12/06/14 01:00	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	12/06/14 01:00	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	12/06/14 01:00	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	12/06/14 01:00	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	12/06/14 01:00	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	12/06/14 01:00	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:00	
2-Butanone (MEK)	3.8 U	10	3.8	1	12/06/14 01:00	
2-Hexanone	2.2 U	25	2.2	1	12/06/14 01:00	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	12/06/14 01:00	
Acetone	5.6 U	50	5.6	1	12/06/14 01:00	
Benzene	0.21 U	1.0	0.21	1	12/06/14 01:00	
Bromochloromethane	0.27 U	5.0	0.27	1	12/06/14 01:00	
Bromodichloromethane	0.22 U	1.0	0.22	1	12/06/14 01:00	
Bromoform	0.42 U	2.0	0.42	1	12/06/14 01:00	
Bromomethane	0.23 U	5.0	0.23	1	12/06/14 01:00	
Carbon Disulfide	2.4 U	10	2.4	1	12/06/14 01:00	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	12/06/14 01:00	
Chlorobenzene	0.16 U	1.0	0.16	1	12/06/14 01:00	
Chloroethane	0.52 U	5.0	0.52	1	12/06/14 01:00	
Chloroform	0.35 U	1.0	0.35	1	12/06/14 01:00	
Chloromethane	0.36 U	1.0	0.36	1	12/06/14 01:00	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	12/06/14 01:00	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	12/06/14 01:00	
Cyclohexane	0.24 U	10	0.24	1	12/06/14 01:00	
Dibromochloromethane	0.21 U	1.0	0.21	1	12/06/14 01:00	
Dichlorodifluoromethane	0.23 U	20	0.23	1	12/06/14 01:00	
Ethylbenzene	0.21 U	1.0	0.21	1	12/06/14 01:00	
Isopropylbenzene	0.14 U	1.0	0.14	1	12/06/14 01:00	
m,p-Xylenes	0.31 U	2.0	0.31	1	12/06/14 01:00	
Methyl Acetate	0.84 U	10	0.84	1	12/06/14 01:00	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	12/06/14 01:00	
Methylene Chloride	0.21 U	5.0	0.21	1	12/06/14 01:00	
o-Xylene	0.14 U	1.0	0.14	1	12/06/14 01:00	
Styrene	0.29 U	1.0	0.29	1	12/06/14 01:00	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1409447-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	12/06/14 01:00	
Toluene	0.19 U	1.0	0.19	1	12/06/14 01:00	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	12/06/14 01:00	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	12/06/14 01:00	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	12/06/14 01:00	
Trichlorofluoromethane	0.24 U	20	0.24	1	12/06/14 01:00	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	12/06/14 01:00	
Vinyl Chloride	0.36 U	1.0	0.36	1	12/06/14 01:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	12/06/14 01:00	
4-Bromofluorobenzene	105	86 - 113	12/06/14 01:00	
Dibromofluoromethane	100	86 - 112	12/06/14 01:00	
Toluene-d8	102	88 - 115	12/06/14 01:00	

Client: Levine Fricke **Service Request:** J1409200
Project: NASA M505
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-MW0013-025.5-20141124	J1409200-001	101	106	99
M505-MW0055-025.0-20141124	J1409200-002	106	103	100
M505-MW0052-010.0-20141124	J1409200-003	103	101	102
M505-MW0039-032.5-20141124	J1409200-004	104	101	101
M505-MW0051-025.0-20141124	J1409200-005	105	105	101
M505-MW0033-025.0-20141124	J1409200-006	102	102	101
M505-MW0040-025.0-20141124	J1409200-007	104	103	104
M505-MW0032-035.0-20141124	J1409200-008	103	105	104
M505-MW0044-027.5-20141124	J1409200-009	106	107	102
M505-MW0025-025.0-20141124	J1409200-010	104	105	100
M505-MW0041-025.0-20141124	J1409200-011	105	108	102
M505-MW0026-035.0-20141124	J1409200-012	104	104	99
M505-MW0042-035.0-20141124	J1409200-013	109	109	102
M505-MW0035-025.0-20141125	J1409200-014	106	105	98
M505-MW0023-025.0-20141125	J1409200-015	109	106	97
M505-MW0036-035.0-20141125	J1409200-016	111	107	101
M505-MW0024-035.0-20141125	J1409200-017	112	107	98
M505-MW0049-027.5-20141125	J1409200-018	115	107	105
Trip Blank	J1409200-019	108	105	102
Lab Control Sample	JQ1409444-01	103	104	99
Duplicate Lab Control Sample	JQ1409444-02	99	105	101
Method Blank	JQ1409444-03	102	105	101
Lab Control Sample	JQ1409447-01	105	103	100
Duplicate Lab Control Sample	JQ1409447-02	105	106	102
Method Blank	JQ1409447-03	107	105	100

Client: Levine Fricke **Service Request:** J1409200
Project: NASA M505
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-MW0013-025.5-20141124	J1409200-001	103
M505-MW0055-025.0-20141124	J1409200-002	105
M505-MW0052-010.0-20141124	J1409200-003	105
M505-MW0039-032.5-20141124	J1409200-004	104
M505-MW0051-025.0-20141124	J1409200-005	104
M505-MW0033-025.0-20141124	J1409200-006	104
M505-MW0040-025.0-20141124	J1409200-007	103
M505-MW0032-035.0-20141124	J1409200-008	104
M505-MW0044-027.5-20141124	J1409200-009	105
M505-MW0025-025.0-20141124	J1409200-010	106
M505-MW0041-025.0-20141124	J1409200-011	103
M505-MW0026-035.0-20141124	J1409200-012	103
M505-MW0042-035.0-20141124	J1409200-013	103
M505-MW0035-025.0-20141125	J1409200-014	102
M505-MW0023-025.0-20141125	J1409200-015	103
M505-MW0036-035.0-20141125	J1409200-016	101
M505-MW0024-035.0-20141125	J1409200-017	100
M505-MW0049-027.5-20141125	J1409200-018	100
Trip Blank	J1409200-019	100
Lab Control Sample	JQ1409444-01	98
Duplicate Lab Control Sample	JQ1409444-02	99
Method Blank	JQ1409444-03	103
Lab Control Sample	JQ1409447-01	95
Duplicate Lab Control Sample	JQ1409447-02	96
Method Blank	JQ1409447-03	102

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Analyzed:**	12/05/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	424301

	Lab Control Sample JQ1409444-01			Duplicate Lab Control Sample JQ1409444-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	50.4	50.0	101	48.1	50.0	96	77-118	5	30
1,1,1-Trichloroethane (TCA)	51.7	50.0	103	48.0	50.0	96	70-122	7	30
1,1,2,2-Tetrachloroethane	52.4	50.0	105	48.3	50.0	96	66-135	8	30
1,1,2-Trichloroethane	50.8	50.0	102	48.3	50.0	97	75-122	5	30
1,1-Dichloroethane (1,1-DCA)	57.7	50.0	115	53.4	50.0	107	79-117	8	30
1,1-Dichloroethene (1,1-DCE)	59.5	50.0	119	53.9	50.0	108	72-128	10	30
1,2,3-Trichlorobenzene	55.0	50.0	110	52.0	50.0	104	62-136	6	30
1,2,4-Trichlorobenzene	53.5	50.0	107	48.7	50.0	97	66-127	9	30
1,2-Dibromo-3-chloropropane (DBCP)	55.4	50.0	111	51.3	50.0	103	60-122	8	30
1,2-Dibromoethane (EDB)	51.6	50.0	103	48.4	50.0	97	76-118	6	30
1,2-Dichlorobenzene	51.4	50.0	103	48.9	50.0	98	81-115	5	30
1,2-Dichloroethane	55.4	50.0	111	51.3	50.0	103	70-117	8	30
1,2-Dichloropropane	55.7	50.0	111	52.5	50.0	105	79-117	6	30
1,3-Dichlorobenzene	52.2	50.0	104	49.4	50.0	99	82-116	5	30
1,4-Dichlorobenzene	44.2	50.0	88	42.3	50.0	85	82-115	4	30
2-Butanone (MEK)	57.3	50.0	115	53.4	50.0	107	62-138	7	30
2-Hexanone	57.3	50.0	115	53.2	50.0	106	74-127	7	30
4-Methyl-2-pentanone (MIBK)	57.2	50.0	114	52.7	50.0	105	77-120	8	30
Acetone	58.2	50.0	116	51.1	50.0	102	42-161	13	30
Benzene	57.0	50.0	114	52.7	50.0	105	80-117	8	30
Bromochloromethane	51.7	50.0	103	49.2	50.0	98	78-118	5	30
Bromodichloromethane	52.7	50.0	105	49.9	50.0	100	75-118	6	30
Bromoform	48.6	50.0	97	45.5	50.0	91	63-121	6	30
Bromomethane	45.0	50.0	90	46.2	50.0	92	31-153	3	30
Carbon Disulfide	54.8	50.0	110	51.4	50.0	103	72-128	6	30
Carbon Tetrachloride	50.7	50.0	101	48.9	50.0	98	67-124	4	30
Chlorobenzene	50.9	50.0	102	48.2	50.0	96	83-118	5	30
Chloroethane	56.7	50.0	113	51.5	50.0	103	68-132	10	30
Chloroform	55.3	50.0	110	51.2	50.0	102	77-116	8	30
Chloromethane	45.9	50.0	92	43.8	50.0	88	60-128	5	30
cis-1,2-Dichloroethene	57.5	50.0	115	52.8	50.0	106	78-117	9	30
cis-1,3-Dichloropropene	54.4	50.0	109	53.0	50.0	106	80-119	3	30
Cyclohexane	57.1	50.0	114	52.4	50.0	105	75-124	9	30
Dibromochloromethane	49.3	50.0	98	46.3	50.0	93	74-121	6	30
Dichlorodifluoromethane	40.1	50.0	80	37.0	50.0	74	49-132	8	30
Ethylbenzene	50.7	50.0	101	48.1	50.0	96	82-119	5	30
Isopropylbenzene	53.7	50.0	107	50.2	50.0	100	78-119	7	30
m,p-Xylenes	89.3	100	89	84.4	100	84	79-122	6	30
Methyl Acetate	57.7	50.0	115	52.4	50.0	105	50-137	10	30
Methyl tert-Butyl Ether	54.9	50.0	110	51.0	50.0	102	73-118	7	30
Methylene Chloride	53.2	50.0	106	50.3	50.0	101	75-123	6	30

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Analyzed:**	12/05/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	424301

	Lab Control Sample JQ1409444-01			Duplicate Lab Control Sample JQ1409444-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	45.8	50.0	92	43.9	50.0	88	80-119	4	30
Styrene	47.1	50.0	94	44.6	50.0	89	80-121	5	30
Tetrachloroethene (PCE)	50.7	50.0	101	49.1	50.0	98	75-126	3	30
Toluene	51.1	50.0	102	48.8	50.0	98	52-152	4	30
trans-1,2-Dichloroethene	58.6	50.0	117	54.4	50.0	109	75-121	8	30
trans-1,3-Dichloropropene	55.7	50.0	111	53.6	50.0	107	76-118	4	30
Trichloroethene (TCE)	49.0	50.0	98	46.1	50.0	92	78-122	6	30
Trichlorofluoromethane	53.1	50.0	106	49.0	50.0	98	58-134	8	30
Trichlorotrifluoroethane	55.8	50.0	112	53.1	50.0	106	77-128	5	30
Vinyl Chloride	52.3	50.0	105	47.0	50.0	94	69-138	11	30

Client: Levine Fricke
Project: NASA M505
Sample Matrix: Water

Service Request: J1409200
Date Analyzed: 12/05/14

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Units: ug/L
Basis: NA
Analysis Lot: 424402

	Lab Control Sample JQ1409447-01			Duplicate Lab Control Sample JQ1409447-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	43.8	50.0	88	48.0	50.0	96	77-118	9	30
1,1,1-Trichloroethane (TCA)	46.4	50.0	93	50.5	50.0	101	70-122	8	30
1,1,2,2-Tetrachloroethane	45.8	50.0	92	50.6	50.0	101	66-135	10	30
1,1,2-Trichloroethane	46.5	50.0	93	48.8	50.0	98	75-122	5	30
1,1-Dichloroethane (1,1-DCA)	52.6	50.0	105	57.7	50.0	115	79-117	9	30
1,1-Dichloroethene (1,1-DCE)	52.1	50.0	104	58.2	50.0	116	72-128	11	30
1,2,3-Trichlorobenzene	46.8	50.0	94	51.1	50.0	102	62-136	9	30
1,2,4-Trichlorobenzene	43.9	50.0	88	47.8	50.0	96	66-127	9	30
1,2-Dibromo-3-chloropropane (DBCP)	47.0	50.0	94	52.4	50.0	105	60-122	11	30
1,2-Dibromoethane (EDB)	45.3	50.0	91	48.5	50.0	97	76-118	7	30
1,2-Dichlorobenzene	44.5	50.0	89	49.1	50.0	98	81-115	10	30
1,2-Dichloroethane	52.2	50.0	104	57.5	50.0	115	70-117	10	30
1,2-Dichloropropane	52.1	50.0	104	56.8	50.0	114	79-117	9	30
1,3-Dichlorobenzene	45.0	50.0	90	49.9	50.0	100	82-116	10	30
1,4-Dichlorobenzene	39.2	50.0	78 *	43.4	50.0	87	82-115	10	30
2-Butanone (MEK)	58.9	50.0	118	63.9	50.0	128	62-138	8	30
2-Hexanone	54.6	50.0	109	60.5	50.0	121	74-127	10	30
4-Methyl-2-pentanone (MIBK)	55.0	50.0	110	60.3	50.0	121 *	77-120	9	30
Acetone	53.8	50.0	108	58.3	50.0	117	42-161	8	30
Benzene	50.6	50.0	101	55.3	50.0	111	80-117	9	30
Bromochloromethane	45.5	50.0	91	50.4	50.0	101	78-118	10	30
Bromodichloromethane	50.0	50.0	100	52.8	50.0	106	75-118	5	30
Bromoform	43.2	50.0	86	46.4	50.0	93	63-121	7	30
Bromomethane	50.8	50.0	102	57.8	50.0	116	31-153	13	30
Carbon Disulfide	47.9	50.0	96	53.3	50.0	107	72-128	11	30
Carbon Tetrachloride	46.4	50.0	93	50.9	50.0	102	67-124	9	30
Chlorobenzene	44.0	50.0	88	48.7	50.0	97	83-118	10	30
Chloroethane	44.9	50.0	90	44.3	50.0	89	68-132	1	30
Chloroform	50.9	50.0	102	54.6	50.0	109	77-116	7	30
Chloromethane	57.2	50.0	114	46.8	50.0	94	60-128	20	30
cis-1,2-Dichloroethene	52.5	50.0	105	57.0	50.0	114	78-117	8	30
cis-1,3-Dichloropropene	48.6	50.0	97	52.7	50.0	105	80-119	8	30
Cyclohexane	54.5	50.0	109	59.0	50.0	118	75-124	8	30
Dibromochloromethane	43.8	50.0	88	47.4	50.0	95	74-121	8	30
Dichlorodifluoromethane	34.2	50.0	68	37.5	50.0	75	49-132	9	30
Ethylbenzene	43.2	50.0	86	47.3	50.0	95	82-119	9	30
Isopropylbenzene	45.9	50.0	92	51.2	50.0	102	78-119	11	30
m,p-Xylenes	76.1	100	76 *	84.2	100	84	79-122	10	30
Methyl Acetate	56.4	50.0	113	61.2	50.0	122	50-137	8	30
Methyl tert-Butyl Ether	49.5	50.0	99	54.7	50.0	109	73-118	10	30
Methylene Chloride	48.0	50.0	96	52.8	50.0	106	75-123	9	30

Client:	Levine Fricke	**Service Request:**	J1409200
Project:	NASA M505	**Date Analyzed:**	12/05/14
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	424402

	Lab Control Sample JQ1409447-01			Duplicate Lab Control Sample JQ1409447-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	40.0	50.0	80	43.4	50.0	87	80-119	8	30
Styrene	40.2	50.0	80	44.0	50.0	88	80-121	9	30
Tetrachloroethene (PCE)	41.4	50.0	83	46.9	50.0	94	75-126	12	30
Toluene	44.0	50.0	88	49.1	50.0	98	52-152	11	30
trans-1,2-Dichloroethene	51.6	50.0	103	58.8	50.0	118	75-121	13	30
trans-1,3-Dichloropropene	49.7	50.0	99	54.1	50.0	108	76-118	8	30
Trichloroethene (TCE)	41.8	50.0	84	46.2	50.0	92	78-122	10	30
Trichlorofluoromethane	49.3	50.0	99	53.4	50.0	107	58-134	8	30
Trichlorotrifluoroethane	48.7	50.0	97	54.0	50.0	108	77-128	10	30
Vinyl Chloride	53.1	50.0	106	57.8	50.0	116	69-138	8	30

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1409200

Project: NASA - M505

Cooler received on 11/26/14 and opened on 11/26/14 by SC

COURIER: ALS (UPS) FEDEX Client Other _____ Airbill # 1Z 458 448 84

1	Were custody seals on outside of cooler?	Yes	(No)
	If yes, how many and where?	#:___ on lid	other
2	Were seals intact and signature and date correct?	Yes No	(N/A)
3	Were custody papers properly filled out?	(Yes) No	N/A
4	Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C)	2.3°C	
5	Thermometer ID	IR1	
6	Temperature Blank Present?	(Yes) No	
7	Were Ice or Ice Packs present	(Ice) Ice Packs	No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes) No	N/A
9	Type of packing material present	Netting Vial Holder	(Bubble Wrap)
		Paper Styrofoam Other	N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes) No	N/A
11	Did all bottle labels and tags agree with custody papers?	(Yes) No	N/A
12	Were the correct bottles used for the tests indicated?	(Yes) No	N/A
13	Were all of the preserved bottles received with the appropriate preservative? HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2 Preservative additions noted below	Yes No	(N/A)
14	Were all samples received within analysis holding times?	(Yes) No	N/A
15	Were all VOA vials free of air bubbles? If present, note below	(Yes) No	N/A
16	Where did the bottles originate?	(ALS) Client	

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

Trip Blank included

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

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SR# J1409200

CAS Contract

J1409200

5

Levine Fricke
NASA M505 & LETF

Project Name: NASA - M505	Project Number:
Project Manager: Scott Starr	Email Address: Scott.Starr@arcadis-us.com
Company/Address: Arcadis 14025 Riveredge Dr. #600 Tampa FL 33637	
Phone #: 813-903-3100	FAX #: 813-903-9115
Sampler's Signature: Kevin Kearney	Sampler's Printed Name: Kevin Kearney

ANALYSIS REQUESTED (Include Method Number ar

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 8260

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX			REMARKS/ ALTERNATE DESCRIPTION
M505-MW0013-025.5-20141124		11/24/14	1403	GW	3	7	
M505-MW0055-025.0-20141124		11/24/14	1409	GW	3	7	
M505-MW0052-010.0-20141124		11/24/14	1440	GW	3	7	
M505-MW0039-032.5-20141124		11/24/14	1451	GW	3	7	
M505-MW0067-025.0-20141124		11/24/14	1513	GW	3	7	
M505-MW0033-025.0-20141124		11/24/14	1547	GW	3	3	
M505-MW0040-025.0-20141124		11/24/14	1552	GW	3	3	
M505-MW0032-025.0-20141124		11/24/14	1613	GW	3	3	
M505-MW0044-027.5-20141124		11/24/14	1616	GW	3	3	
M505-MW0025-025.0-20141124		11/24/14	1653	GW	3	3	
M505-MW0041-025.0-20141124		11/24/14	1656	GW	3	3	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

_____ RUSH (SURCHARGES APPLY)

_____ STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

_____ I. Results Only

_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

_____ III. Results + QC and Calibration Summaries

_____ IV. Data Validation Report with Raw Data

_____ V. Specialized Forms / Custom Report

Edata _____ Yes _____ No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: Dan Ludik	Printed Name: Shawn Lightsey	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 11/25/14 1515	Date/Time: 11/26/14 0930	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

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SR# J1409200 CAS Contract

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Levine Fricke NASA M505 & LETF

Project Name: NASA-M505	Project Number:
Project Manager: Scott Starr	Email Address: Scott.Starr@arcadis-us.com
Company/Address: Arcadis 14025 Riveredge Dr. #600 Tampa FL. 33637	
Phone #: 813-901-3100	FAX #: 813-903-9115
Sampler's Signature: Kevin Kearney	Sampler's Printed Name: Kevin Kearney

ANALYSIS REQUESTED (Include Method Numbe

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 8260

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260	REMARKS/ ALTERNATE DESCRIPTION
M505-MW0026-035.0-20141124		11/24/14	1718	GW	3	3	
M505-MW0042-035.0-20141124		11/24/14	1735		3	3	
M505-MW0035-025.0-20141125		11/25/14	1030		3	3	
M505-MW0023-025.0-20141125		11/25/14	1031		3	3	
M505-MW0036-035.0-20141125		11/25/14	1057		3	3	
M505-MW0024-035.0-20141125		11/25/14	1106		3	3	
M505-MW0049-027.5-20141125		11/25/14	1133	↓	3	3	

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

____ RUSH (SURCHARGES APPLY)

____ STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

____ I. Results Only

____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

____ V. Specialized Forms / Custom Report

Edata ____Yes ____No

INVOICE INFORMATION

PO #

BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP:

CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: David Weeks	Printed Name: Shawn Eichberg	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm: Acs	Firm	Firm	Firm	Firm
Date/Time: 11/25/14 1515	Date/Time: 11/26/14 0930	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Return to Originator; Yellow - Retained by Client

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March 20, 2015 Service Request No:J1501649

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: Building M7-505

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory February 25, 2015
For your reference, these analyses have been assigned our service request number **J1501649.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0023-025.0-20105224	Lab ID: J1501649-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	5.5		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.34	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.31	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.42	I	0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0055-025.0-20105224	Lab ID: J1501649-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Tetrachloroethene (PCE)	0.28	IV	0.22	1.0	ug/L	8260B

CLIENT ID: M505-MW0024-035.0-20105224	Lab ID: J1501649-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	13		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.30	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.53	I	0.19	1.0	ug/L	8260B

CLIENT ID: M505-MW0025-025.0-20105224	Lab ID: J1501649-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	160		0.36	1.0	ug/L	8260B
Ethylbenzene	0.21	I	0.21	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.32	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	3.8		0.19	1.0	ug/L	8260B

CLIENT ID: M505-MW0026-035.0-20105224	Lab ID: J1501649-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	6.1		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.28	IV	0.22	1.0	ug/L	8260B

CLIENT ID: M505-MW0041-025.0-20105224	Lab ID: J1501649-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	3.8		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.23	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.28	I	0.19	1.0	ug/L	8260B

CLIENT ID: M505-MW0042-035.0-20105224	Lab ID: J1501649-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	38		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.22	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	5.4		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0032-035.0-20105224	Lab ID: J1501649-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	190		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.26	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.92	I	0.19	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0032-035.0-20105224 — **Lab ID: J1501649-008**

Analyte	Results	Flag	MDL	PQL	Units	Method
Vinyl Chloride	29		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0033-025.0-20105224 — **Lab ID: J1501649-009**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	46		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.26	IV	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.97	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.86	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	4.2		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0051-025.0-20105224 — **Lab ID: J1501649-010**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	46		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.5		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	3.8		0.36	1.0	ug/L	8260B
Vinyl Chloride	19		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0052-010.0-20105224 — **Lab ID: J1501649-011**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	6.2		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.20	I	0.19	1.0	ug/L	8260B

CLIENT ID: M505-MW0013IS-025.0-20105224 — **Lab ID: J1501649-012**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	0.68	I	0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0035-025.0-20105224 — **Lab ID: J1501649-013**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	37		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.1		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	2.0		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0036-035.0-20105224 — **Lab ID: J1501649-014**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	1.7		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0039-032.5-20105224 — **Lab ID: J1501649-015**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	16		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.72	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	3.4		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0040-025.0-20105224 — **Lab ID: J1501649-016**

Analyte	Results	Flag	MDL	PQL	Units	Method
cis-1,2-Dichloroethene	6.8		0.36	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0040-025.0-20105224	Lab ID: J1501649-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
trans-1,2-Dichloroethene	0.36	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	1.7		0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0044-027.5-20105224	Lab ID: J1501649-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
cis-1,2-Dichloroethene	2.0		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.22	IV	0.22	1.0	ug/L	8260B
Trichloroethene (TCE)	0.73	I	0.36	1.0	ug/L	8260B

CLIENT ID: M505-MW0049-027.5-20105224	Lab ID: J1501649-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
1,1-Dichloroethene (1,1-DCE)	0.26	I	0.16	1.0	ug/L	8260B
cis-1,2-Dichloroethene	150		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	1.0		0.36	1.0	ug/L	8260B

Client: Levine Fricke
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

Service Request:J1501649
Date Received:2/25/15

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Nineteen water samples were received for analysis at ALS Environmental on 2-25-15. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Volatile Organic Analyses:

Method 8260B: Method Blank JQ1501608-02 contained a low level amount of Tetrachloroethene (PCE) above the Method Detection Limit (MDL), but less than the Method Reporting Limit (MRL). Several samples exhibited this analyte in approximately the same concentration as the method blank. The data are flagged with a qualifier to indicate the results are estimated values. The method blank results may indicate the potential for a false positive.

Approved by _____ Date 3/20/2015

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	9/20/2016
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2015002	2/3/2017
North Carolina Department of Environment and Natural Resources	527	12/31/2015
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2015
Virginia Environmental Accreditation Program	460191	12/14/2015

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1501649

Project: Building M7-505/TL014020.0002

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1501649-001	M505-MW0023-025.0-20105224	2/24/2015	1333
J1501649-002	M505-MW0055-025.0-20105224	2/24/2015	1455
J1501649-003	M505-MW0024-035.0-20105224	2/24/2015	1404
J1501649-004	M505-MW0025-025.0-20105224	2/24/2015	1140
J1501649-005	M505-MW0026-035.0-20105224	2/24/2015	1213
J1501649-006	M505-MW0041-025.0-20105224	2/24/2015	1257
J1501649-007	M505-MW0042-035.0-20105224	2/24/2015	1220
J1501649-008	M505-MW0032-035.0-20105224	2/24/2015	1359
J1501649-009	M505-MW0033-025.0-20105224	2/24/2015	1329
J1501649-010	M505-MW0051-025.0-20105224	2/24/2015	1448
J1501649-011	M505-MW0052-010.0-20105224	2/24/2015	1526
J1501649-012	M505-MW0013IS-025.0-20105224	2/24/2015	0940
J1501649-013	M505-MW0035-025.0-20105224	2/24/2015	0930
J1501649-014	M505-MW0036-035.0-20105224	2/24/2015	1005
J1501649-015	M505-MW0039-032.5-20105224	2/24/2015	1019
J1501649-016	M505-MW0040-025.0-20105224	2/24/2015	1052
J1501649-017	M505-MW0044-027.5-20105224	2/24/2015	1135
J1501649-018	M505-MW0049-027.5-20105224	2/24/2015	1059
J1501649-019	Trip Blank	2/24/2015	0000

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:33
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0023-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 13:00	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 13:00	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 13:00	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 13:00	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 13:00	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 13:00	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 13:00	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 13:00	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 13:00	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 13:00	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 13:00	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 13:00	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 13:00	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 13:00	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:00	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 13:00	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 13:00	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 13:00	
Acetone	5.6 U	50	5.6	1	03/05/15 13:00	
Benzene	0.21 U	1.0	0.21	1	03/05/15 13:00	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 13:00	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 13:00	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 13:00	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 13:00	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 13:00	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 13:00	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:00	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 13:00	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 13:00	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 13:00	
cis-1,2-Dichloroethene	**5.5**	1.0	0.36	1	03/05/15 13:00	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 13:00	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 13:00	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 13:00	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 13:00	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 13:00	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 13:00	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 13:00	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 13:00	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 13:00	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 13:00	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 13:00	
Styrene	0.29 U	1.0	0.29	1	03/05/15 13:00	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:33
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0023-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.34 IV**	1.0	0.22	1	03/05/15 13:00	
Toluene	0.19 U	1.0	0.19	1	03/05/15 13:00	
trans-1,2-Dichloroethene	**0.31 I**	1.0	0.19	1	03/05/15 13:00	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 13:00	
Trichloroethene (TCE)	**0.42 I**	1.0	0.36	1	03/05/15 13:00	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 13:00	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 13:00	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 13:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 13:00	
4-Bromofluorobenzene	102	86 - 113	03/05/15 13:00	
Dibromofluoromethane	94	86 - 112	03/05/15 13:00	
Toluene-d8	110	88 - 115	03/05/15 13:00	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:55
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0055-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 13:27	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 13:27	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 13:27	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 13:27	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 13:27	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 13:27	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 13:27	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 13:27	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 13:27	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 13:27	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 13:27	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 13:27	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 13:27	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 13:27	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:27	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 13:27	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 13:27	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 13:27	
Acetone	5.6 U	50	5.6	1	03/05/15 13:27	
Benzene	0.21 U	1.0	0.21	1	03/05/15 13:27	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 13:27	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 13:27	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 13:27	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 13:27	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 13:27	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 13:27	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:27	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 13:27	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 13:27	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 13:27	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	03/05/15 13:27	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 13:27	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 13:27	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 13:27	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 13:27	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 13:27	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 13:27	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 13:27	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 13:27	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 13:27	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 13:27	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 13:27	
Styrene	0.29 U	1.0	0.29	1	03/05/15 13:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:55
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0055-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.28 IV**	1.0	0.22	1	03/05/15 13:27	
Toluene	0.19 U	1.0	0.19	1	03/05/15 13:27	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 13:27	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 13:27	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 13:27	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 13:27	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 13:27	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 13:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/05/15 13:27	
4-Bromofluorobenzene	100	86 - 113	03/05/15 13:27	
Dibromofluoromethane	92	86 - 112	03/05/15 13:27	
Toluene-d8	110	88 - 115	03/05/15 13:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:04
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0024-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 13:54	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 13:54	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 13:54	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 13:54	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 13:54	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 13:54	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 13:54	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 13:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 13:54	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 13:54	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 13:54	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 13:54	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 13:54	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 13:54	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:54	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 13:54	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 13:54	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 13:54	
Acetone	5.6 U	50	5.6	1	03/05/15 13:54	
Benzene	0.21 U	1.0	0.21	1	03/05/15 13:54	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 13:54	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 13:54	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 13:54	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 13:54	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 13:54	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 13:54	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 13:54	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 13:54	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 13:54	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 13:54	
cis-1,2-Dichloroethene	**13**	1.0	0.36	1	03/05/15 13:54	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 13:54	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 13:54	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 13:54	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 13:54	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 13:54	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 13:54	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 13:54	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 13:54	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 13:54	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 13:54	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 13:54	
Styrene	0.29 U	1.0	0.29	1	03/05/15 13:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:04
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0024-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.30 IV**	1.0	0.22	1	03/05/15 13:54	
Toluene	0.19 U	1.0	0.19	1	03/05/15 13:54	
trans-1,2-Dichloroethene	**0.53 I**	1.0	0.19	1	03/05/15 13:54	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 13:54	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 13:54	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 13:54	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 13:54	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 13:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 13:54	
4-Bromofluorobenzene	102	86 - 113	03/05/15 13:54	
Dibromofluoromethane	93	86 - 112	03/05/15 13:54	
Toluene-d8	110	88 - 115	03/05/15 13:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 11:40
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0025-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 14:21	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 14:21	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 14:21	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 14:21	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 14:21	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 14:21	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 14:21	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 14:21	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 14:21	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 14:21	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 14:21	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 14:21	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 14:21	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 14:21	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 14:21	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 14:21	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 14:21	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 14:21	
Acetone	5.6 U	50	5.6	1	03/05/15 14:21	
Benzene	0.21 U	1.0	0.21	1	03/05/15 14:21	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 14:21	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 14:21	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 14:21	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 14:21	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 14:21	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 14:21	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 14:21	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 14:21	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 14:21	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 14:21	
cis-1,2-Dichloroethene	**160**	1.0	0.36	1	03/05/15 14:21	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 14:21	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 14:21	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 14:21	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 14:21	
Ethylbenzene	**0.21 I**	1.0	0.21	1	03/05/15 14:21	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 14:21	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 14:21	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 14:21	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 14:21	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 14:21	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 14:21	
Styrene	0.29 U	1.0	0.29	1	03/05/15 14:21	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 11:40
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0025-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.32 IV**	1.0	0.22	1	03/05/15 14:21	
Toluene	0.19 U	1.0	0.19	1	03/05/15 14:21	
trans-1,2-Dichloroethene	**3.8**	1.0	0.19	1	03/05/15 14:21	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 14:21	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 14:21	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 14:21	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 14:21	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 14:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	03/05/15 14:21	
4-Bromofluorobenzene	101	86 - 113	03/05/15 14:21	
Dibromofluoromethane	95	86 - 112	03/05/15 14:21	
Toluene-d8	111	88 - 115	03/05/15 14:21	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:13
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0026-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 14:48	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 14:48	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 14:48	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 14:48	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 14:48	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 14:48	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 14:48	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 14:48	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 14:48	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 14:48	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 14:48	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 14:48	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 14:48	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 14:48	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 14:48	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 14:48	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 14:48	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 14:48	
Acetone	5.6 U	50	5.6	1	03/05/15 14:48	
Benzene	0.21 U	1.0	0.21	1	03/05/15 14:48	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 14:48	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 14:48	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 14:48	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 14:48	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 14:48	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 14:48	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 14:48	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 14:48	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 14:48	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 14:48	
cis-1,2-Dichloroethene	**6.1**	1.0	0.36	1	03/05/15 14:48	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 14:48	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 14:48	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 14:48	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 14:48	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 14:48	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 14:48	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 14:48	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 14:48	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 14:48	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 14:48	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 14:48	
Styrene	0.29 U	1.0	0.29	1	03/05/15 14:48	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:13
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0026-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.28 IV**	1.0	0.22	1	03/05/15 14:48	
Toluene	0.19 U	1.0	0.19	1	03/05/15 14:48	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 14:48	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 14:48	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 14:48	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 14:48	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 14:48	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 14:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 14:48	
4-Bromofluorobenzene	102	86 - 113	03/05/15 14:48	
Dibromofluoromethane	95	86 - 112	03/05/15 14:48	
Toluene-d8	108	88 - 115	03/05/15 14:48	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:57
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0041-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 15:16	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 15:16	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 15:16	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 15:16	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 15:16	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 15:16	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 15:16	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 15:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 15:16	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 15:16	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 15:16	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 15:16	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 15:16	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 15:16	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 15:16	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 15:16	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 15:16	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 15:16	
Acetone	5.6 U	50	5.6	1	03/05/15 15:16	
Benzene	0.21 U	1.0	0.21	1	03/05/15 15:16	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 15:16	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 15:16	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 15:16	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 15:16	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 15:16	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 15:16	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 15:16	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 15:16	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 15:16	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 15:16	
cis-1,2-Dichloroethene	**3.8**	1.0	0.36	1	03/05/15 15:16	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 15:16	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 15:16	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 15:16	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 15:16	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 15:16	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 15:16	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 15:16	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 15:16	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 15:16	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 15:16	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 15:16	
Styrene	0.29 U	1.0	0.29	1	03/05/15 15:16	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:57
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0041-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.23 IV**	1.0	0.22	1	03/05/15 15:16	
Toluene	0.19 U	1.0	0.19	1	03/05/15 15:16	
trans-1,2-Dichloroethene	**0.28 I**	1.0	0.19	1	03/05/15 15:16	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 15:16	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 15:16	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 15:16	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 15:16	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 15:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 15:16	
4-Bromofluorobenzene	102	86 - 113	03/05/15 15:16	
Dibromofluoromethane	93	86 - 112	03/05/15 15:16	
Toluene-d8	110	88 - 115	03/05/15 15:16	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:20
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0042-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 15:43	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 15:43	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 15:43	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 15:43	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 15:43	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 15:43	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 15:43	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 15:43	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 15:43	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 15:43	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 15:43	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 15:43	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 15:43	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 15:43	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 15:43	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 15:43	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 15:43	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 15:43	
Acetone	5.6 U	50	5.6	1	03/05/15 15:43	
Benzene	0.21 U	1.0	0.21	1	03/05/15 15:43	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 15:43	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 15:43	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 15:43	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 15:43	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 15:43	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 15:43	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 15:43	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 15:43	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 15:43	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 15:43	
cis-1,2-Dichloroethene	**38**	1.0	0.36	1	03/05/15 15:43	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 15:43	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 15:43	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 15:43	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 15:43	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 15:43	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 15:43	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 15:43	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 15:43	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 15:43	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 15:43	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 15:43	
Styrene	0.29 U	1.0	0.29	1	03/05/15 15:43	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 12:20
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0042-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.22 IV**	1.0	0.22	1	03/05/15 15:43	
Toluene	0.19 U	1.0	0.19	1	03/05/15 15:43	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	03/05/15 15:43	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 15:43	
Trichloroethene (TCE)	**5.4**	1.0	0.36	1	03/05/15 15:43	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 15:43	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 15:43	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 15:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/05/15 15:43	
4-Bromofluorobenzene	100	86 - 113	03/05/15 15:43	
Dibromofluoromethane	93	86 - 112	03/05/15 15:43	
Toluene-d8	110	88 - 115	03/05/15 15:43	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:59
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0032-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 16:10	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 16:10	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 16:10	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 16:10	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 16:10	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 16:10	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 16:10	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 16:10	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 16:10	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 16:10	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 16:10	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 16:10	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 16:10	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 16:10	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 16:10	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 16:10	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 16:10	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 16:10	
Acetone	5.6 U	50	5.6	1	03/05/15 16:10	
Benzene	0.21 U	1.0	0.21	1	03/05/15 16:10	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 16:10	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 16:10	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 16:10	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 16:10	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 16:10	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 16:10	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 16:10	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 16:10	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 16:10	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 16:10	
cis-1,2-Dichloroethene	**190**	1.0	0.36	1	03/05/15 16:10	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 16:10	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 16:10	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 16:10	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 16:10	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 16:10	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 16:10	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 16:10	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 16:10	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 16:10	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 16:10	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 16:10	
Styrene	0.29 U	1.0	0.29	1	03/05/15 16:10	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:59
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0032-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.26 IV**	1.0	0.22	1	03/05/15 16:10	
Toluene	0.19 U	1.0	0.19	1	03/05/15 16:10	
trans-1,2-Dichloroethene	**0.92 I**	1.0	0.19	1	03/05/15 16:10	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 16:10	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 16:10	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 16:10	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 16:10	
Vinyl Chloride	**29**	1.0	0.36	1	03/05/15 16:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 16:10	
4-Bromofluorobenzene	99	86 - 113	03/05/15 16:10	
Dibromofluoromethane	94	86 - 112	03/05/15 16:10	
Toluene-d8	110	88 - 115	03/05/15 16:10	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:29
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0033-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 16:37	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 16:37	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 16:37	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 16:37	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 16:37	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 16:37	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 16:37	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 16:37	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 16:37	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 16:37	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 16:37	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 16:37	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 16:37	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 16:37	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 16:37	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 16:37	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 16:37	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 16:37	
Acetone	5.6 U	50	5.6	1	03/05/15 16:37	
Benzene	0.21 U	1.0	0.21	1	03/05/15 16:37	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 16:37	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 16:37	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 16:37	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 16:37	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 16:37	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 16:37	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 16:37	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 16:37	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 16:37	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 16:37	
cis-1,2-Dichloroethene	**46**	1.0	0.36	1	03/05/15 16:37	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 16:37	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 16:37	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 16:37	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 16:37	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 16:37	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 16:37	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 16:37	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 16:37	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 16:37	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 16:37	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 16:37	
Styrene	0.29 U	1.0	0.29	1	03/05/15 16:37	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 13:29
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0033-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.26 IV**	1.0	0.22	1	03/05/15 16:37	
Toluene	0.19 U	1.0	0.19	1	03/05/15 16:37	
trans-1,2-Dichloroethene	**0.97 I**	1.0	0.19	1	03/05/15 16:37	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 16:37	
Trichloroethene (TCE)	**0.86 I**	1.0	0.36	1	03/05/15 16:37	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 16:37	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 16:37	
Vinyl Chloride	**4.2**	1.0	0.36	1	03/05/15 16:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	03/05/15 16:37	
4-Bromofluorobenzene	99	86 - 113	03/05/15 16:37	
Dibromofluoromethane	94	86 - 112	03/05/15 16:37	
Toluene-d8	110	88 - 115	03/05/15 16:37	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:48
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0051-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 17:04	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 17:04	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 17:04	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 17:04	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 17:04	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 17:04	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 17:04	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 17:04	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 17:04	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 17:04	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 17:04	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 17:04	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 17:04	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 17:04	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:04	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 17:04	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 17:04	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 17:04	
Acetone	5.6 U	50	5.6	1	03/05/15 17:04	
Benzene	0.21 U	1.0	0.21	1	03/05/15 17:04	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 17:04	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 17:04	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 17:04	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 17:04	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 17:04	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 17:04	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:04	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 17:04	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 17:04	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 17:04	
cis-1,2-Dichloroethene	**46**	1.0	0.36	1	03/05/15 17:04	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 17:04	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 17:04	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 17:04	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 17:04	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 17:04	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 17:04	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 17:04	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 17:04	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 17:04	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 17:04	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 17:04	
Styrene	0.29 U	1.0	0.29	1	03/05/15 17:04	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 14:48
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0051-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 17:04	
Toluene	0.19 U	1.0	0.19	1	03/05/15 17:04	
trans-1,2-Dichloroethene	**1.5**	1.0	0.19	1	03/05/15 17:04	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 17:04	
Trichloroethene (TCE)	**3.8**	1.0	0.36	1	03/05/15 17:04	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 17:04	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 17:04	
Vinyl Chloride	**19**	1.0	0.36	1	03/05/15 17:04	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	03/05/15 17:04	
4-Bromofluorobenzene	102	86 - 113	03/05/15 17:04	
Dibromofluoromethane	95	86 - 112	03/05/15 17:04	
Toluene-d8	109	88 - 115	03/05/15 17:04	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 15:26
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0052-010.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 17:32	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 17:32	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 17:32	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 17:32	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 17:32	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 17:32	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 17:32	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 17:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 17:32	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 17:32	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 17:32	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 17:32	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 17:32	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 17:32	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:32	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 17:32	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 17:32	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 17:32	
Acetone	5.6 U	50	5.6	1	03/05/15 17:32	
Benzene	0.21 U	1.0	0.21	1	03/05/15 17:32	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 17:32	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 17:32	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 17:32	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 17:32	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 17:32	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 17:32	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:32	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 17:32	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 17:32	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 17:32	
cis-1,2-Dichloroethene	**6.2**	1.0	0.36	1	03/05/15 17:32	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 17:32	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 17:32	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 17:32	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 17:32	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 17:32	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 17:32	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 17:32	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 17:32	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 17:32	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 17:32	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 17:32	
Styrene	0.29 U	1.0	0.29	1	03/05/15 17:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 15:26
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0052-010.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 17:32	
Toluene	0.19 U	1.0	0.19	1	03/05/15 17:32	
trans-1,2-Dichloroethene	**0.20 I**	1.0	0.19	1	03/05/15 17:32	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 17:32	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 17:32	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 17:32	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 17:32	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 17:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	96	72 - 121	03/05/15 17:32	
4-Bromofluorobenzene	101	86 - 113	03/05/15 17:32	
Dibromofluoromethane	93	86 - 112	03/05/15 17:32	
Toluene-d8	111	88 - 115	03/05/15 17:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 09:40
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0013IS-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 17:59	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 17:59	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 17:59	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 17:59	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 17:59	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 17:59	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 17:59	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 17:59	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 17:59	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 17:59	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 17:59	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 17:59	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 17:59	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 17:59	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:59	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 17:59	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 17:59	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 17:59	
Acetone	5.6 U	50	5.6	1	03/05/15 17:59	
Benzene	0.21 U	1.0	0.21	1	03/05/15 17:59	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 17:59	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 17:59	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 17:59	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 17:59	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 17:59	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 17:59	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 17:59	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 17:59	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 17:59	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 17:59	
cis-1,2-Dichloroethene	**0.68 I**	1.0	0.36	1	03/05/15 17:59	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 17:59	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 17:59	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 17:59	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 17:59	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 17:59	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 17:59	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 17:59	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 17:59	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 17:59	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 17:59	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 17:59	
Styrene	0.29 U	1.0	0.29	1	03/05/15 17:59	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 09:40
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0013IS-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 17:59	
Toluene	0.19 U	1.0	0.19	1	03/05/15 17:59	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 17:59	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 17:59	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 17:59	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 17:59	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 17:59	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 17:59	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/05/15 17:59	
4-Bromofluorobenzene	99	86 - 113	03/05/15 17:59	
Dibromofluoromethane	92	86 - 112	03/05/15 17:59	
Toluene-d8	111	88 - 115	03/05/15 17:59	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 09:30
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0035-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 18:26	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 18:26	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 18:26	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 18:26	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 18:26	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 18:26	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 18:26	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 18:26	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 18:26	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 18:26	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 18:26	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 18:26	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 18:26	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 18:26	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 18:26	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 18:26	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 18:26	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 18:26	
Acetone	5.6 U	50	5.6	1	03/05/15 18:26	
Benzene	0.21 U	1.0	0.21	1	03/05/15 18:26	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 18:26	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 18:26	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 18:26	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 18:26	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 18:26	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 18:26	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 18:26	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 18:26	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 18:26	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 18:26	
cis-1,2-Dichloroethene	**37**	1.0	0.36	1	03/05/15 18:26	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 18:26	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 18:26	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 18:26	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 18:26	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 18:26	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 18:26	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 18:26	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 18:26	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 18:26	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 18:26	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 18:26	
Styrene	0.29 U	1.0	0.29	1	03/05/15 18:26	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 09:30
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0035-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 18:26	
Toluene	0.19 U	1.0	0.19	1	03/05/15 18:26	
trans-1,2-Dichloroethene	**1.1**	1.0	0.19	1	03/05/15 18:26	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 18:26	
Trichloroethene (TCE)	**2.0**	1.0	0.36	1	03/05/15 18:26	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 18:26	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 18:26	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 18:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/05/15 18:26	
4-Bromofluorobenzene	101	86 - 113	03/05/15 18:26	
Dibromofluoromethane	96	86 - 112	03/05/15 18:26	
Toluene-d8	110	88 - 115	03/05/15 18:26	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:05
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0036-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 18:53	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 18:53	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 18:53	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 18:53	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 18:53	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 18:53	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 18:53	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 18:53	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 18:53	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 18:53	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 18:53	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 18:53	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 18:53	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 18:53	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 18:53	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 18:53	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 18:53	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 18:53	
Acetone	5.6 U	50	5.6	1	03/05/15 18:53	
Benzene	0.21 U	1.0	0.21	1	03/05/15 18:53	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 18:53	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 18:53	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 18:53	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 18:53	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 18:53	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 18:53	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 18:53	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 18:53	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 18:53	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 18:53	
cis-1,2-Dichloroethene	**1.7**	1.0	0.36	1	03/05/15 18:53	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 18:53	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 18:53	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 18:53	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 18:53	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 18:53	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 18:53	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 18:53	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 18:53	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 18:53	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 18:53	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 18:53	
Styrene	0.29 U	1.0	0.29	1	03/05/15 18:53	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:05
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0036-035.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 18:53	
Toluene	0.19 U	1.0	0.19	1	03/05/15 18:53	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 18:53	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 18:53	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 18:53	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 18:53	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 18:53	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 18:53	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	72 - 121	03/05/15 18:53	
4-Bromofluorobenzene	100	86 - 113	03/05/15 18:53	
Dibromofluoromethane	95	86 - 112	03/05/15 18:53	
Toluene-d8	109	88 - 115	03/05/15 18:53	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:19
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0039-032.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 19:20	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 19:20	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 19:20	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 19:20	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 19:20	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 19:20	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 19:20	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 19:20	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 19:20	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 19:20	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 19:20	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 19:20	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 19:20	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 19:20	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 19:20	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 19:20	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 19:20	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 19:20	
Acetone	5.6 U	50	5.6	1	03/05/15 19:20	
Benzene	0.21 U	1.0	0.21	1	03/05/15 19:20	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 19:20	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 19:20	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 19:20	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 19:20	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 19:20	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 19:20	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 19:20	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 19:20	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 19:20	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 19:20	
cis-1,2-Dichloroethene	**16**	1.0	0.36	1	03/05/15 19:20	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 19:20	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 19:20	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 19:20	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 19:20	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 19:20	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 19:20	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 19:20	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 19:20	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 19:20	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 19:20	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 19:20	
Styrene	0.29 U	1.0	0.29	1	03/05/15 19:20	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:19
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0039-032.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 19:20	
Toluene	0.19 U	1.0	0.19	1	03/05/15 19:20	
trans-1,2-Dichloroethene	**0.72 I**	1.0	0.19	1	03/05/15 19:20	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 19:20	
Trichloroethene (TCE)	**3.4**	1.0	0.36	1	03/05/15 19:20	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 19:20	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 19:20	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 19:20	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	03/05/15 19:20	
4-Bromofluorobenzene	100	86 - 113	03/05/15 19:20	
Dibromofluoromethane	95	86 - 112	03/05/15 19:20	
Toluene-d8	110	88 - 115	03/05/15 19:20	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:52
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0040-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 19:48	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 19:48	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 19:48	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 19:48	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 19:48	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 19:48	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 19:48	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 19:48	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 19:48	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 19:48	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 19:48	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 19:48	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 19:48	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 19:48	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 19:48	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 19:48	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 19:48	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 19:48	
Acetone	5.6 U	50	5.6	1	03/05/15 19:48	
Benzene	0.21 U	1.0	0.21	1	03/05/15 19:48	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 19:48	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 19:48	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 19:48	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 19:48	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 19:48	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 19:48	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 19:48	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 19:48	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 19:48	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 19:48	
cis-1,2-Dichloroethene	**6.8**	1.0	0.36	1	03/05/15 19:48	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 19:48	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 19:48	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 19:48	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 19:48	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 19:48	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 19:48	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 19:48	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 19:48	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 19:48	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 19:48	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 19:48	
Styrene	0.29 U	1.0	0.29	1	03/05/15 19:48	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:52
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0040-025.0-20105224	**Units:**	ug/L
Lab Code:	J1501649-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/05/15 19:48	
Toluene	0.19 U	1.0	0.19	1	03/05/15 19:48	
trans-1,2-Dichloroethene	**0.36 I**	1.0	0.19	1	03/05/15 19:48	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 19:48	
Trichloroethene (TCE)	**1.7**	1.0	0.36	1	03/05/15 19:48	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 19:48	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 19:48	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 19:48	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	99	72 - 121	03/05/15 19:48	
4-Bromofluorobenzene	100	86 - 113	03/05/15 19:48	
Dibromofluoromethane	96	86 - 112	03/05/15 19:48	
Toluene-d8	109	88 - 115	03/05/15 19:48	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 11:35
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0044-027.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 20:15	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 20:15	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 20:15	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 20:15	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 20:15	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 20:15	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 20:15	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 20:15	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 20:15	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 20:15	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 20:15	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 20:15	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 20:15	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 20:15	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 20:15	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 20:15	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 20:15	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 20:15	
Acetone	5.6 U	50	5.6	1	03/05/15 20:15	
Benzene	0.21 U	1.0	0.21	1	03/05/15 20:15	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 20:15	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 20:15	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 20:15	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 20:15	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 20:15	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 20:15	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 20:15	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 20:15	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 20:15	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 20:15	
cis-1,2-Dichloroethene	**2.0**	1.0	0.36	1	03/05/15 20:15	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 20:15	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 20:15	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 20:15	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 20:15	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 20:15	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 20:15	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 20:15	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 20:15	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 20:15	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 20:15	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 20:15	
Styrene	0.29 U	1.0	0.29	1	03/05/15 20:15	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 11:35
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0044-027.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.22 IV**	1.0	0.22	1	03/05/15 20:15	
Toluene	0.19 U	1.0	0.19	1	03/05/15 20:15	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 20:15	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 20:15	
Trichloroethene (TCE)	**0.73 I**	1.0	0.36	1	03/05/15 20:15	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 20:15	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 20:15	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 20:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	100	72 - 121	03/05/15 20:15	
4-Bromofluorobenzene	100	86 - 113	03/05/15 20:15	
Dibromofluoromethane	94	86 - 112	03/05/15 20:15	
Toluene-d8	109	88 - 115	03/05/15 20:15	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:59
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0049-027.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/06/15 04:24	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/06/15 04:24	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/06/15 04:24	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/06/15 04:24	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/06/15 04:24	
1,1-Dichloroethene (1,1-DCE)	**0.26 I**	1.0	0.16	1	03/06/15 04:24	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/06/15 04:24	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/06/15 04:24	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/06/15 04:24	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/06/15 04:24	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/06/15 04:24	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/06/15 04:24	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/06/15 04:24	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/06/15 04:24	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/06/15 04:24	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/06/15 04:24	
2-Hexanone	2.2 U	25	2.2	1	03/06/15 04:24	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/06/15 04:24	
Acetone	5.6 U	50	5.6	1	03/06/15 04:24	
Benzene	0.21 U	1.0	0.21	1	03/06/15 04:24	
Bromochloromethane	0.27 U	5.0	0.27	1	03/06/15 04:24	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/06/15 04:24	
Bromoform	0.42 U	2.0	0.42	1	03/06/15 04:24	
Bromomethane	0.23 U	5.0	0.23	1	03/06/15 04:24	
Carbon Disulfide	2.4 U	10	2.4	1	03/06/15 04:24	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/06/15 04:24	
Chlorobenzene	0.16 U	1.0	0.16	1	03/06/15 04:24	
Chloroethane	0.52 U	5.0	0.52	1	03/06/15 04:24	
Chloroform	0.35 U	1.0	0.35	1	03/06/15 04:24	
Chloromethane	0.36 U	1.0	0.36	1	03/06/15 04:24	
cis-1,2-Dichloroethene	**150**	1.0	0.36	1	03/06/15 04:24	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/06/15 04:24	
Cyclohexane	0.24 U	10	0.24	1	03/06/15 04:24	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/06/15 04:24	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/06/15 04:24	
Ethylbenzene	0.21 U	1.0	0.21	1	03/06/15 04:24	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/06/15 04:24	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/06/15 04:24	
Methyl Acetate	0.84 U	10	0.84	1	03/06/15 04:24	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/06/15 04:24	
Methylene Chloride	0.21 U	5.0	0.21	1	03/06/15 04:24	
o-Xylene	0.14 U	1.0	0.14	1	03/06/15 04:24	
Styrene	0.29 U	1.0	0.29	1	03/06/15 04:24	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 10:59
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	M505-MW0049-027.5-20105224	**Units:**	ug/L
Lab Code:	J1501649-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/06/15 04:24	
Toluene	0.19 U	1.0	0.19	1	03/06/15 04:24	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	03/06/15 04:24	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/06/15 04:24	
Trichloroethene (TCE)	**1.0**	1.0	0.36	1	03/06/15 04:24	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/06/15 04:24	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/06/15 04:24	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/06/15 04:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/06/15 04:24	
4-Bromofluorobenzene	101	86 - 113	03/06/15 04:24	
Dibromofluoromethane	94	86 - 112	03/06/15 04:24	
Toluene-d8	110	88 - 115	03/06/15 04:24	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 00:00
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1501649-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/06/15 03:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/06/15 03:57	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/06/15 03:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/06/15 03:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/06/15 03:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/06/15 03:57	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/06/15 03:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/06/15 03:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/06/15 03:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/06/15 03:57	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/06/15 03:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/06/15 03:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/06/15 03:57	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/06/15 03:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/06/15 03:57	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/06/15 03:57	
2-Hexanone	2.2 U	25	2.2	1	03/06/15 03:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/06/15 03:57	
Acetone	5.6 U	50	5.6	1	03/06/15 03:57	
Benzene	0.21 U	1.0	0.21	1	03/06/15 03:57	
Bromochloromethane	0.27 U	5.0	0.27	1	03/06/15 03:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/06/15 03:57	
Bromoform	0.42 U	2.0	0.42	1	03/06/15 03:57	
Bromomethane	0.23 U	5.0	0.23	1	03/06/15 03:57	
Carbon Disulfide	2.4 U	10	2.4	1	03/06/15 03:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/06/15 03:57	
Chlorobenzene	0.16 U	1.0	0.16	1	03/06/15 03:57	
Chloroethane	0.52 U	5.0	0.52	1	03/06/15 03:57	
Chloroform	0.35 U	1.0	0.35	1	03/06/15 03:57	
Chloromethane	0.36 U	1.0	0.36	1	03/06/15 03:57	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	03/06/15 03:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/06/15 03:57	
Cyclohexane	0.24 U	10	0.24	1	03/06/15 03:57	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/06/15 03:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/06/15 03:57	
Ethylbenzene	0.21 U	1.0	0.21	1	03/06/15 03:57	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/06/15 03:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/06/15 03:57	
Methyl Acetate	0.84 U	10	0.84	1	03/06/15 03:57	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/06/15 03:57	
Methylene Chloride	0.21 U	5.0	0.21	1	03/06/15 03:57	
o-Xylene	0.14 U	1.0	0.14	1	03/06/15 03:57	
Styrene	0.29 U	1.0	0.29	1	03/06/15 03:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	02/24/15 00:00
Sample Matrix:	Water	**Date Received:**	02/25/15 09:55
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1501649-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/06/15 03:57	
Toluene	0.19 U	1.0	0.19	1	03/06/15 03:57	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/06/15 03:57	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/06/15 03:57	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/06/15 03:57	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/06/15 03:57	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/06/15 03:57	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/06/15 03:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	98	72 - 121	03/06/15 03:57	
4-Bromofluorobenzene	101	86 - 113	03/06/15 03:57	
Dibromofluoromethane	94	86 - 112	03/06/15 03:57	
Toluene-d8	111	88 - 115	03/06/15 03:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1501608-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/05/15 12:33	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/05/15 12:33	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/05/15 12:33	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/05/15 12:33	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/05/15 12:33	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/05/15 12:33	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/05/15 12:33	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/05/15 12:33	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/05/15 12:33	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/05/15 12:33	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/05/15 12:33	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/05/15 12:33	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/05/15 12:33	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/05/15 12:33	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/05/15 12:33	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/05/15 12:33	
2-Hexanone	2.2 U	25	2.2	1	03/05/15 12:33	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/05/15 12:33	
Acetone	5.6 U	50	5.6	1	03/05/15 12:33	
Benzene	0.21 U	1.0	0.21	1	03/05/15 12:33	
Bromochloromethane	0.27 U	5.0	0.27	1	03/05/15 12:33	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/05/15 12:33	
Bromoform	0.42 U	2.0	0.42	1	03/05/15 12:33	
Bromomethane	0.23 U	5.0	0.23	1	03/05/15 12:33	
Carbon Disulfide	2.4 U	10	2.4	1	03/05/15 12:33	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/05/15 12:33	
Chlorobenzene	0.16 U	1.0	0.16	1	03/05/15 12:33	
Chloroethane	0.52 U	5.0	0.52	1	03/05/15 12:33	
Chloroform	0.35 U	1.0	0.35	1	03/05/15 12:33	
Chloromethane	0.36 U	1.0	0.36	1	03/05/15 12:33	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	03/05/15 12:33	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/05/15 12:33	
Cyclohexane	0.24 U	10	0.24	1	03/05/15 12:33	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/05/15 12:33	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/05/15 12:33	
Ethylbenzene	0.21 U	1.0	0.21	1	03/05/15 12:33	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/05/15 12:33	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/05/15 12:33	
Methyl Acetate	0.84 U	10	0.84	1	03/05/15 12:33	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/05/15 12:33	
Methylene Chloride	0.21 U	5.0	0.21	1	03/05/15 12:33	
o-Xylene	0.14 U	1.0	0.14	1	03/05/15 12:33	
Styrene	0.29 U	1.0	0.29	1	03/05/15 12:33	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1501608-02	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.39 I**	1.0	0.22	1	03/05/15 12:33	
Toluene	0.19 U	1.0	0.19	1	03/05/15 12:33	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/05/15 12:33	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/05/15 12:33	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/05/15 12:33	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/05/15 12:33	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/05/15 12:33	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/05/15 12:33	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/05/15 12:33	
4-Bromofluorobenzene	101	86 - 113	03/05/15 12:33	
Dibromofluoromethane	93	86 - 112	03/05/15 12:33	
Toluene-d8	111	88 - 115	03/05/15 12:33	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1501638-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	03/06/15 03:30	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	03/06/15 03:30	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	03/06/15 03:30	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	03/06/15 03:30	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	03/06/15 03:30	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	03/06/15 03:30	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	03/06/15 03:30	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	03/06/15 03:30	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	03/06/15 03:30	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	03/06/15 03:30	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	03/06/15 03:30	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	03/06/15 03:30	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	03/06/15 03:30	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	03/06/15 03:30	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	03/06/15 03:30	
2-Butanone (MEK)	3.8 U	10	3.8	1	03/06/15 03:30	
2-Hexanone	2.2 U	25	2.2	1	03/06/15 03:30	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	03/06/15 03:30	
Acetone	5.6 U	50	5.6	1	03/06/15 03:30	
Benzene	0.21 U	1.0	0.21	1	03/06/15 03:30	
Bromochloromethane	0.27 U	5.0	0.27	1	03/06/15 03:30	
Bromodichloromethane	0.22 U	1.0	0.22	1	03/06/15 03:30	
Bromoform	0.42 U	2.0	0.42	1	03/06/15 03:30	
Bromomethane	0.23 U	5.0	0.23	1	03/06/15 03:30	
Carbon Disulfide	2.4 U	10	2.4	1	03/06/15 03:30	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	03/06/15 03:30	
Chlorobenzene	0.16 U	1.0	0.16	1	03/06/15 03:30	
Chloroethane	0.52 U	5.0	0.52	1	03/06/15 03:30	
Chloroform	0.35 U	1.0	0.35	1	03/06/15 03:30	
Chloromethane	0.36 U	1.0	0.36	1	03/06/15 03:30	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	03/06/15 03:30	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	03/06/15 03:30	
Cyclohexane	0.24 U	10	0.24	1	03/06/15 03:30	
Dibromochloromethane	0.21 U	1.0	0.21	1	03/06/15 03:30	
Dichlorodifluoromethane	0.23 U	20	0.23	1	03/06/15 03:30	
Ethylbenzene	0.21 U	1.0	0.21	1	03/06/15 03:30	
Isopropylbenzene	0.14 U	1.0	0.14	1	03/06/15 03:30	
m,p-Xylenes	0.31 U	2.0	0.31	1	03/06/15 03:30	
Methyl Acetate	0.84 U	10	0.84	1	03/06/15 03:30	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	03/06/15 03:30	
Methylene Chloride	0.21 U	5.0	0.21	1	03/06/15 03:30	
o-Xylene	0.14 U	1.0	0.14	1	03/06/15 03:30	
Styrene	0.29 U	1.0	0.29	1	03/06/15 03:30	

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1501638-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	03/06/15 03:30	
Toluene	0.19 U	1.0	0.19	1	03/06/15 03:30	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	03/06/15 03:30	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	03/06/15 03:30	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	03/06/15 03:30	
Trichlorofluoromethane	0.24 U	20	0.24	1	03/06/15 03:30	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	03/06/15 03:30	
Vinyl Chloride	0.36 U	1.0	0.36	1	03/06/15 03:30	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	97	72 - 121	03/06/15 03:30	
4-Bromofluorobenzene	100	86 - 113	03/06/15 03:30	
Dibromofluoromethane	95	86 - 112	03/06/15 03:30	
Toluene-d8	109	88 - 115	03/06/15 03:30	

Client: Levine Fricke **Service Request:** J1501649

Project: Building M7-505/TL014020.0002

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-MW0023-025.0-20105224	J1501649-001	97	102	94
M505-MW0055-025.0-20105224	J1501649-002	98	100	92
M505-MW0024-035.0-20105224	J1501649-003	97	102	93
M505-MW0025-025.0-20105224	J1501649-004	99	101	95
M505-MW0026-035.0-20105224	J1501649-005	97	102	95
M505-MW0041-025.0-20105224	J1501649-006	97	102	93
M505-MW0042-035.0-20105224	J1501649-007	98	100	93
M505-MW0032-035.0-20105224	J1501649-008	97	99	94
M505-MW0033-025.0-20105224	J1501649-009	99	99	94
M505-MW0051-025.0-20105224	J1501649-010	99	102	95
M505-MW0052-010.0-20105224	J1501649-011	96	101	93
M505-MW0013IS-025.0-20105224	J1501649-012	98	99	92
M505-MW0035-025.0-20105224	J1501649-013	98	101	96
M505-MW0036-035.0-20105224	J1501649-014	100	100	95
M505-MW0039-032.5-20105224	J1501649-015	99	100	95
M505-MW0040-025.0-20105224	J1501649-016	99	100	96
M505-MW0044-027.5-20105224	J1501649-017	100	100	94
M505-MW0049-027.5-20105224	J1501649-018	98	101	94
Trip Blank	J1501649-019	98	101	94
Lab Control Sample	JQ1501608-01	95	100	96
Method Blank	JQ1501608-02	97	101	93
Lab Control Sample	JQ1501638-01	97	99	96
Duplicate Lab Control Sample	JQ1501638-02	96	99	97
Method Blank	JQ1501638-03	97	100	95

Client: Levine Fricke **Service Request:** J1501649

Project: Building M7-505/TL014020.0002

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-MW0023-025.0-20105224	J1501649-001	110
M505-MW0055-025.0-20105224	J1501649-002	110
M505-MW0024-035.0-20105224	J1501649-003	110
M505-MW0025-025.0-20105224	J1501649-004	111
M505-MW0026-035.0-20105224	J1501649-005	108
M505-MW0041-025.0-20105224	J1501649-006	110
M505-MW0042-035.0-20105224	J1501649-007	110
M505-MW0032-035.0-20105224	J1501649-008	110
M505-MW0033-025.0-20105224	J1501649-009	110
M505-MW0051-025.0-20105224	J1501649-010	109
M505-MW0052-010.0-20105224	J1501649-011	111
M505-MW0013IS-025.0-20105224	J1501649-012	111
M505-MW0035-025.0-20105224	J1501649-013	110
M505-MW0036-035.0-20105224	J1501649-014	109
M505-MW0039-032.5-20105224	J1501649-015	110
M505-MW0040-025.0-20105224	J1501649-016	109
M505-MW0044-027.5-20105224	J1501649-017	109
M505-MW0049-027.5-20105224	J1501649-018	110
Trip Blank	J1501649-019	111
Lab Control Sample	JQ1501608-01	112
Method Blank	JQ1501608-02	111
Lab Control Sample	JQ1501638-01	111
Duplicate Lab Control Sample	JQ1501638-02	111
Method Blank	JQ1501638-03	109

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	03/06/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	435318

	Lab Control Sample JQ1501638-01			Duplicate Lab Control Sample JQ1501638-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	53.0	50.0	106	51.7	50.0	103	77-118	3	30
1,1,1-Trichloroethane (TCA)	43.0	50.0	86	42.5	50.0	85	70-122	1	30
1,1,2,2-Tetrachloroethane	51.5	50.0	103	52.0	50.0	104	66-135	1	30
1,1,2-Trichloroethane	52.6	50.0	105	51.5	50.0	103	75-122	2	30
1,1-Dichloroethane (1,1-DCA)	44.5	50.0	89	43.2	50.0	86	79-117	3	30
1,1-Dichloroethene (1,1-DCE)	43.6	50.0	87	42.8	50.0	86	72-128	2	30
1,2,3-Trichlorobenzene	53.2	50.0	106	53.0	50.0	106	62-136	<1	30
1,2,4-Trichlorobenzene	53.5	50.0	107	52.6	50.0	105	66-127	2	30
1,2-Dibromo-3-chloropropane (DBCP)	45.9	50.0	92	47.4	50.0	95	60-122	3	30
1,2-Dibromoethane (EDB)	52.5	50.0	105	52.4	50.0	105	76-118	<1	30
1,2-Dichlorobenzene	54.5	50.0	109	53.9	50.0	108	81-115	1	30
1,2-Dichloroethane	43.5	50.0	87	43.2	50.0	86	70-117	<1	30
1,2-Dichloropropane	43.9	50.0	88	42.8	50.0	86	79-117	3	30
1,3-Dichlorobenzene	56.3	50.0	113	55.2	50.0	110	82-116	2	30
1,4-Dichlorobenzene	55.3	50.0	111	54.6	50.0	109	82-115	1	30
2-Butanone (MEK)	43.5	50.0	87	44.4	50.0	89	62-138	2	30
2-Hexanone	52.8	50.0	106	54.7	50.0	109	74-127	4	30
4-Methyl-2-pentanone (MIBK)	51.4	50.0	103	53.2	50.0	106	77-120	3	30
Acetone	40.6	50.0	81	41.7	50.0	83	42-161	3	30
Benzene	44.5	50.0	89	43.7	50.0	87	80-117	2	30
Bromochloromethane	44.8	50.0	90	44.5	50.0	89	78-118	<1	30
Bromodichloromethane	44.7	50.0	89	44.0	50.0	88	75-118	2	30
Bromoform	45.3	50.0	91	45.5	50.0	91	63-121	<1	30
Bromomethane	47.0	50.0	94	45.9	50.0	92	31-153	2	30
Carbon Disulfide	42.4	50.0	85	41.3	50.0	83	72-128	3	30
Carbon Tetrachloride	40.2	50.0	80	39.3	50.0	79	67-124	2	30
Chlorobenzene	54.0	50.0	108	53.0	50.0	106	83-118	2	30
Chloroethane	43.2	50.0	86	43.2	50.0	86	68-132	<1	30
Chloroform	43.7	50.0	87	42.8	50.0	86	77-116	2	30
Chloromethane	47.1	50.0	94	44.9	50.0	90	60-128	5	30
cis-1,2-Dichloroethene	44.1	50.0	88	43.3	50.0	87	78-117	2	30
cis-1,3-Dichloropropene	53.2	50.0	106	52.7	50.0	105	80-119	<1	30
Cyclohexane	44.4	50.0	89	43.2	50.0	86	75-124	3	30
Dibromochloromethane	48.1	50.0	96	47.5	50.0	95	74-121	1	30
Dichlorodifluoromethane	45.1	50.0	90	44.8	50.0	90	49-132	<1	30
Ethylbenzene	55.9	50.0	112	54.3	50.0	109	82-119	3	30
Isopropylbenzene	56.9	50.0	114	55.4	50.0	111	78-119	3	30
m,p-Xylenes	112	100	112	109	100	109	79-122	3	30
Methyl Acetate	41.4	50.0	83	42.6	50.0	85	50-137	3	30
Methyl tert-Butyl Ether	42.6	50.0	85	42.7	50.0	85	73-118	<1	30
Methylene Chloride	40.1	50.0	80	39.7	50.0	79	75-123	1	30

Client:	Levine Fricke	**Service Request:**	J1501649
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	03/06/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	435318

	Lab Control Sample JQ1501638-01			Duplicate Lab Control Sample JQ1501638-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	54.8	50.0	110	54.1	50.0	108	80-119	1	30
Styrene	55.7	50.0	111	54.5	50.0	109	80-121	2	30
Tetrachloroethene (PCE)	49.5	50.0	99	48.6	50.0	97	75-126	2	30
Toluene	52.9	50.0	106	51.9	50.0	104	52-152	2	30
trans-1,2-Dichloroethene	44.4	50.0	89	43.3	50.0	87	75-121	2	30
trans-1,3-Dichloropropene	53.0	50.0	106	52.5	50.0	105	76-118	<1	30
Trichloroethene (TCE)	43.8	50.0	88	43.1	50.0	86	78-122	2	30
Trichlorofluoromethane	43.7	50.0	87	42.4	50.0	85	58-134	3	30
Trichlorotrifluoroethane	43.7	50.0	87	43.2	50.0	86	77-128	1	30
Vinyl Chloride	41.8	50.0	84	45.1	50.0	90	69-138	8	30

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1501649

Project: Bldg M7505

Cooler received on 2.25.15 and opened on 2.25.15 GB

COURIER: ALS UPS (FEDEX) Client Other _____ Airbill # 805940341283

1	Were custody seals on outside of cooler?	Yes	(No)
	If yes, how many and where?	#:___ on lid	other
2	Were seals intact and signature and date correct?	Yes No	(N/A)
3	Were custody papers properly filled out?	(Yes)	No N/A
4	Temperature of cooler(s) upon receipt (Should be > 0°C and < 6°C)	0.3	
5	Thermometer ID	IR1	
6	Temperature Blank Present?	(Yes)	No
7	Were Ice or Ice Packs present	(Ice)	Ice Packs No
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No N/A
9	Type of packing material present	Netting	Vial Holder (Bubble Wrap)
		Paper	Styrofoam Other N/A
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No N/A
11	Did all bottle labels and tags agree with custody papers?	Yes	(No) N/A
12	Were the correct bottles used for the tests indicated?	(Yes)	No N/A
13	Were all of the preserved bottles received with the appropriate preservative?	Yes No	(N/A)
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2		
	Preservative additions noted below		
14	Were all samples received within analysis holding times?	(Yes)	No N/A
15	Were all VOA vials free of air bubbles? If present, note below	(Yes)	No N/A
16	Where did the bottles originate?	(ALS)	Client

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above: Sample MW0042 is MW0024 on the vial labels. Sample date and time matches.

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1501649

ALS Environmental

9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

008, 009, 010, 011, 012, 013, 015, 016, 017, 018, 019, 020, 022, 023, 024, 025, 026

J1501649 5
Levine Fricke
Building M7-505

Project Name: Building M7-505	
Project Number: TL014020.0002	Report To Scott Starr
Tampa FL, 33637	
Phone # 813-661-1810	FAX # 813-661-6043
Sampler Signature	Sampler Printed Name DAVID DANKERL

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks
M505-MW0023-025.0-20150224		2/24/15	1333	Liquid	3	X							
M505-MW0055-025.0-20150224		2/24/15	1455	Liquid	3	X							MW0055
M505-MW0024-035.0-20150224		2/24/15	1404	Liquid	3	X							
M505-MW0025-025.0-20150224		2/24/15	1140	Liquid	3	X							
M505-MW0026-035.0-20150224		2/24/15	1213	Liquid	3	X							
M505-MW0041-025.0-20150224		2/24/15	1257	Liquid	3	X							
M505-MW0042-035.0-20150224		2/24/15	1220	Liquid	3	X							
M505-MW0032-035.0-20150224		2/24/15	1359	Liquid	3	X							-035.0-
M505-MW0033-025.0-20150224		2/24/15	1329	Liquid	3	X							
M505-MW0051-025.0-20150224		2/24/15	1448	Liquid	3	X							

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Special Instructions/Comments:

0.3°C

Turnaround Requirements

___ RUSH (SURCHARGES APPLY)

_X_ Standard

REQUESTED FAX DATE

Requested Report Date

Report Requirements

___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Cilibration Summaries
___ IV. Data Validation Report with Raw Data

EData _____Yes _____No

Invoice Information

P.O.#_____

Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature DAVID DANKERL	Signature	Signature	Signature	Signature	Signature
Printed Name Arcadis	Printed Name	Printed Name	Printed Name	Printed Name	Printed Name
Firm 5/24/15 1630 UPS Fedex	Firm ALS	Firm	Firm	Firm	Firm
Date/Time	Date/Time 2.25.15 0955	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1501649

ALS Environmental

9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

008, 009, 010, 011, 012, 013, 014, 015, 016, 017, 018, 019, 020, 021, 022, 023, 024, 025, 026

J1501649 5
Levine Fricke
Building M7-505

Project Name: Building M7-505	
Project Number: TL014020.0002	Report To: Scott Starr
Tampa FL, 33637	
Phone # 813-661-1810	FAX # 813-661-6043
Sampler Signature	Sampler Printed Name: DAVID DANKERL

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks
M505-MW0052-010.0-20150224		5/24/15	1526	Liquid	3		X						
M505-MW0013IS-025.0-20150224		5/24/15	0940	Liquid	3		X						
M505-MW0035-025.0-20150224		5/24/15	0930	Liquid	3		X						
M505-MW0036-035.0-20150224		5/24/15	1005	Liquid	3		X						
M505-MW0039-032.5-20150224		5/24/15	1019	Liquid	3		X						
M505-MW0040-025.0-20150224		5/24/15	1052	Liquid	3		X						-025.0-
M505-MW0044-027.5-20150224		5/24/15	1135	Liquid	3		X						
M505-MW0049-027.5-20150224		5/24/15	1059	Liquid	3		X						
Trip Blank			✓	Liquid	3		X						
20. —	—		—	Liquid									

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Special Instructions/Comments:

0.3 C

Turnaround Requirements

___ RUSH (SURCHARGES APPLY)

__✓__ Standard

REQUESTED FAX DATE

Requested Report Date

Report Requirements

___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Cilibration Summaries
___ IV. Data Validation Report with Raw Data

EData _____Yes _____No

Invoice Information

P.O.#_____

Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERL	Printed Name: G Bauer	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 5/24/15 1630 via FedEx	Date/Time: 2.25.15 0955	Date/Time	Date/Time	Date/Time	Date/Time

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	KSC - NASA
WELL NO:	MW0023	SAMPLE ID:	M505 - MW0023-025.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	5.54	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35' feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25'	PURGING INITIATED AT:	1306	PURGING ENDED AT:	1332	TOTAL VOLUME PURGED (gallons):	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1324	1.0	1.0	0.05	5.67	6.71	24.33	2455	0.55	8.82	clear	none	+61
1329	0.15	1.15	0.05	5.63	6.72	24.34	2459	0.53	6.76	"	"	+60
1332	0.15	1.30	0.05	5.68	6.71	24.33	2458	0.51	7.14	"	"	+59

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	1333	SAMPLING ENDED AT:	1338
PUMP OR TUBING DEPTH IN WELL (feet):	25'	TUBING MATERIAL CODE:	LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	
FIELD DECONTAMINATION:	PUMP Y (N)	TUBING Y (N) (replaced)		DUPLICATE:	Y (N)		

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0023	3	CG	40mL	HCl	~	"	8260 @ VOA	RFPP	~200

REMARKS: Sampled @ 1333

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC - NASA	
WELL NO: MW0055	SAMPLE ID: M505-MW0055-025-0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 6.81	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1428	PURGING ENDED AT: 1454	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1448	1.0	1.0	0.05	6.91	7.03	21.48	3281	0.49	4.19	clear	none	-44
1451	0.15	1.15	0.05	6.91	7.02	21.49	3212	0.46	5.12	"	"	-48
1454	0.15	1.30	0.05	6.92	7.02	21.48	3214	0.43	5.02	"	"	-48

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankal / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1455	SAMPLING ENDED AT: 1458
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0055	3	CA	40ml	HCL	–	–	8260B VOC's	RFPP	~250

REMARKS:
Sampled @ 1458

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MW505	SITE LOCATION: KSC-NASA	
WELL NO: MW0024	SAMPLE ID: MW505-MW0024-035.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 5.53	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1337	PURGING ENDED AT: 1403	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1357	1.0	1.0	0.05	5.59	6.59	23.66	2965	1.26	9.62	clear	none	+347
1400	0.15	1.15	0.05	5.59	6.61	23.65	2910	1.23	8.64	"	"	+399
1403	0.15	1.30	0.05	5.60	6.62	23.66	2913	1.20	8.82	"	"	+401

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Amec	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1404	SAMPLING ENDED AT: 1407
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0024	3	CG	40ml	HCl	—	—	8260B VOCs	RFPP	~200

REMARKS: Sample @ 1404

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. The above do not constitute all of the information required by Chapter 62-160, F.A.C.
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units Temperature: ± 0.2 °C Specific Conductance: ± 5% Dissolved Oxygen: all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity: all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-MSDS	SITE LOCATION: Cape Canaveral, FL.
WELL NO: MW-25	SAMPLE ID: MSDS-MW0025-025.0-20150224
DATE: 2/24/15	

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 7.48	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1121	PURGING ENDED AT: 1138	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1129	0.40	0.40	0.05	7.66	6.60	24.0	2950	0.62	1.2	Clear	None	
1132	0.15	0.55		7.65	6.61	24.1	2950	0.76	2.6			
1135	0.15	0.70		7.65	6.62	24.1	2950	0.70	5.2			
1138	0.15	0.85		7.66	6.62	24.2	2940	0.70	4.0			-19

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1140	SAMPLING ENDED AT: 1143
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW25	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1140

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	MASA-M505	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	MW-26	SAMPLE ID:	M505-MW026-0350-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16		7.49	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 60 feet) + 0.16 gallons = 0.18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	1154	1211	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1202	0.40	0.40	0.05	8.85	6.74	24.3	3230	0.38	0.6	Clear	None	
1205	0.15	0.55		8.85	6.73	24.3	3210	0.37	0.6			
1208	0.15	0.70		8.84	6.74	24.2	3200	0.33	0.4			
1211	0.15	0.85		8.84	6.74	24.2	3190	0.34	0.4			-13

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW/Arcadis		1213	1216

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-26	3	CG	40mL	HCL	–	–	8260B	RFPP	~90

REMARKS: Sampled (1213)

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: M505	SITE LOCATION: KSC-NASA	
WELL NO: MW0041	SAMPLE ID: M505-MW0041-025-0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.78	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + 0.1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1230	PURGING ENDED AT: 1258	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1250	1.0	1.0	0.05	5.80	6.99	25.92	2905	0.36	18.14	clear	none	-50
1253	0.15	1.15	0.05	5.81	6.50	25.94	2942	0.35	17.62	"	"	-49
1256	0.15	1.30	0.05	5.80	6.49	25.97	2943	0.33	16.54	"	"	-48

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1257	SAMPLING ENDED AT: 1300
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0041	3	CG	40mL	HCl	—	—	8260B	APP	~200

REMARKS:
Sampled @ 1257'

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MS05	SITE LOCATION: KSC-NASA	
WELL NO: MW0042	SAMPLE ID: MS05-MW0042-035.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 5.78	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	PURGING INITIATED AT: 1153	PURGING ENDED AT: 1219	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1213	1.0	1.0	0.05	5.95	6.68	26.28	3237	0.50	9.93	clear	none	-21
1216	0.15	1.15	0.05	5.95	6.67	26.29	3239	0.48	7.86	"	"	-23
1219	0.15	1.30	0.05	5.96	6.68	26.31	3241	0.46	8.46	"	"	-25

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1220	SAMPLING ENDED AT: 1223
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0042	3	CG	40 ml	HCl	–	–	8260B	RFPP	~200

REMARKS: sampled @ 1220

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA-M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-32	SAMPLE ID:	M505-MW0032-035.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	32.5 feet to 37.5 feet	7.77	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	1340	1357	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1348	0.40	0.40	0.05	8.43	6.84	23.8	1818	0.66	1.2	Clear	none	
1351	0.15	0.55	"	8.42	6.84	23.9	1818	0.51	2.7	"	"	"
1354	0.15	0.70	"	8.42	6.83	23.9	1817	0.44	6.4	"	"	"
1357	0.15	0.85	"	8.44	6.84	23.8	1820	0.44	1.7	"	"	+115

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJW/Arcadis		1359	1402

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-32	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1359

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - MSDS	SITE LOCATION:	Cape Canaveral, FL	
WELL NO:	MW-33	SAMPLE ID:	MSDS-MW033-025.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	22.5 feet to 27.5 feet	7.67	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
25	25	1310	1327	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1318	0.40	0.40	0.05	7.85	6.69	24.1	1697	0.42	4.1	Clear	None	
1321	0.15	0.55		7.85	6.69	24.1	1697	0.42	3.9			
1324	0.15	0.70		7.85	6.70	24.2	1698	0.49	5.7			
1327	0.15	0.85		7.84	6.70	24.2	1700	0.50	5.0			407

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DSL / Arcadis		1329	1332

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
25	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y N (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-33	3	CG	40mL	HCl	—	—	8260B	RFPP	~80

REMARKS: Sampled (1329)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA - M-505	SITE LOCATION: Cape Canaveral, FL.
WELL NO: MW-51	SAMPLE ID: M505-MW-0051-025.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: feet to feet	STATIC DEPTH TO WATER (feet): 6.68	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1429	PURGING ENDED AT: 1446	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1437	0.4	0.40	0.05	7.38	7.01	22.7	1904	0.55	7.7	Clear	none	
1440	0.15	0.55		7.35	6.97	22.7	1910	0.58	7.4			
1443	0.15	0.70		7.33	6.92	22.7	1915	0.62	3.6			
1446	0.15	0.85		7.33	6.91	22.7	1916	0.62	2.8			-88

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DWI / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1448	SAMPLING ENDED AT: 1451
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-51	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ (1448)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA - M505	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-52	SAMPLE ID:	M505-MW0052-010.0-20150224
DATE:	2/24/15		

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	5 feet to 15 feet	6.89	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (15 feet − 6.89 feet) X 0.04 gallons/foot = 0.32 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
8.5	8.5	1504	1524	2.0

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1515	1.1	1.1	0.10	7.08	5.19	21.3	261	0.32	17	Light Brown	None	
1518	0.3	1.4		7.08	5.17	21.3	252	0.31	15			
1521	0.3	1.7		7.08	5.11	21.3	249	0.31	14			
1524	0.3	2.0		7.08	5.10	21.3	248	0.31	14			+154

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
O.H. / Arcadis		1526	1529

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
8.5	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-52	3	CG	40mL	HCL	[redacted]	—	8260B	RFPP	~80

REMARKS: Sampled @ 1520 / Note: 2 vials have ~4mm bubbles, Could not remove

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	MS05	SITE LOCATION:	KSC-NASA	
WELL NO:	MW-0013IS	SAMPLE ID:	MS05-MW0013IS-0825-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (Inches):	2"	TUBING DIAMETER (Inches):	3/16	WELL SCREEN INTERVAL DEPTH:	23 feet to 28 feet	STATIC DEPTH TO WATER (feet):	6.25	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25.5	PURGING INITIATED AT:	0913	PURGING ENDED AT:	0939	TOTAL VOLUME PURGED (gallons):	1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0933	1.0	1.0	0.05	6.32	7.09	24.47	3029	4.79	15.16	clear	none	+174
0936	0.15	1.15	0.05	6.32	7.09	24.49	3035	4.78	13.12	〃	〃	+170
0939	0.15	1.30	0.05	6.32	7.08	24.51	3039	4.75	12.10	〃	〃	+166

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	David Dankel	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0940	SAMPLING ENDED AT:	0943
PUMP OR TUBING DEPTH IN WELL (feet):	25.5	TUBING MATERIAL CODE:	LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:		FILTER SIZE: ____ µm	

FIELD DECONTAMINATION: PUMP Y N TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13IS	3	CG	40 ml	HCl	–	–	8260B VOCs	RFPP	~200

REMARKS: Sampled @ 0940

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA – MSDS	SITE LOCATION:	Cape Canaveral, FL.
WELL NO:	ML-35	SAMPLE ID:	MW0035.025.0-20150224 DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches):	1"	TUBING DIAMETER (inches):	3/16"	WELL SCREEN INTERVAL DEPTH:	22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet):	3.74	PURGE PUMP TYPE OR BAILER:	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	25	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	25	PURGING INITIATED AT:	0911	PURGING ENDED AT:	0928	TOTAL VOLUME PURGED (gallons):	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0919	0.40	0.40	0.05	3.99	6.52	22.8	2590	0.48	7.0	clear	none	
0922	0.15	0.55	"	3.99	6.54	22.8	2590	0.51	5.1	"	"	"
0925	0.15	0.70	"	3.99	6.55	22.9	2600	0.46	3.8	"	"	"
0928	0.15	0.85	"	3.99	6.56	23.0	2610	0.48	3.9	"	"	+22

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FT.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	DJL/CFR	SAMPLER(S) SIGNATURE(S):		SAMPLING INITIATED AT:	0930	SAMPLING ENDED AT:	0937

PUMP OR TUBING DEPTH IN WELL (feet):	25	TUBING MATERIAL CODE:	PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
ML-35	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 0939

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	NASA · MSDS	SITE LOCATION:	Cape Canaveral, FL
WELL NO:	MW-36	SAMPLE ID:	MW0036.035.0-20150224
		DATE:	2/24/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH:	STATIC DEPTH TO WATER (feet):	PURGE PUMP TYPE OR BAILER:
1	3/16	32.5 feet to 37.5 feet	3.28	PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (.0014 gallons/foot X 60 feet) + 0.1 gallons = 0.18 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):
35	35	0946	1003	0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0954	0.40	0.40	0.05	3.51	6.86	22.9	1978	0.85	2.1	clear	none	
0957	0.15	0.55		3.50	6.88	23.3	1924	0.71	1.8			
1000	0.15	0.70		3.50	6.88	23.2	1904	0.68	1.2			
1003	0.15	0.55		3.50	6.89	23.3	1889	0.56	0.7			+10

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT:	SAMPLING ENDED AT:
DJL / Arcadis		1005	1008

PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE:	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
35	PE		

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-36	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ 1005

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MS05	SITE LOCATION: KSC - NASA	
WELL NO: MW-0039	SAMPLE ID: MS05-MW0039-032.5-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.13	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 33	PURGING INITIATED AT: 0952	PURGING ENDED AT: 1018	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1012	1.0	1.0	0.05	5.33	6.40	23.83	2306	1.41	5.82	clear	none	+219
1015	0.15	1.15	0.05	5.34	6.42	23.85	2305	1.37	5.60	"	"	+225
1018	0.15	1.30	0.05	5.34	6.41	23.88	2304	1.34	5.42	"	"	+221

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; 1" = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: Dawn Dankel / Aradas	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1019	SAMPLING ENDED AT: 1021
PUMP OR TUBING DEPTH IN WELL (feet): 32.5	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-0039	3	CG	40mL	HCl	—	—	8260B-VOCs	RFPP	~200

REMARKS: Sampled @ 1019

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: MS05	SITE LOCATION: KSC-NASA	
WELL NO: MW0040	SAMPLE ID: MS05-MW0040-025.0-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 50 feet) + .1 gallons = .17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1045	1.0	1.0	0.05	5.60	6.79	24.49	1086	1.52	10.13	clear	none	+104
1048	0.15	1.15	0.05	5.60	6.80	24.51	1080	1.50	8.62	"	"	+102
1051	0.15	1.30	0.05	5.66	6.81	24.52	1079	1.48	8.46	"	"	+101

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1052	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y (N replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0040	3	CG	40 ml	HCl	–	–	8260B VOCs	RFPP	~200

REMARKS: Sampled @ 1052

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME:	M505	SITE LOCATION:	LCSC - NASA	
WELL NO:	MW00644	SAMPLE ID:	M505 - MW00644 - 032.5 - 20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 5.03	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1108	PURGING ENDED AT: 1134	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1128	1.0	1.0	0.05	5.10	6.68	25.24	3415	0.65	16.18	clear	none	+130
1131	0.15	1.15	0.05	5.10	6.67	25.22	3415	0.63	14.24	"	"	+131
1134	0.15	1.30	0.05	5.11	6.68	25.24	3416	0.64	12.10	"	"	+131

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION:	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1138
David Dankal / Arcadis			

PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: LDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW00644	3	CG	40mL	HCL	–	–	8260B - VOCs	RFPP	~200

REMARKS:
Sampled @ 1135

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA-M505	SITE LOCATION: Cape Canaveral, FL	
WELL NO: MW-49	SAMPLE ID: ~~MW-49~~ MW-49-027.5-20150224	DATE: 2/24/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.99	PURGE PUMP TYPE OR BAILER: P

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1040	PURGING ENDED AT: 1057	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1048	0.40	0.40	0.05	8.08	6.72	23.9	1570	0.50	1.6	Clear	None	"
1051	0.15	0.55	"	8.08	6.73	24.1	1548	0.48	1.7	"	"	"
1054	0.15	0.70	"	8.07	6.73	24.1	1507	0.42	1.4	"	"	"
1057	0.15	0.85	"	8.07	6.74	24.2	1488	0.39	2.1	"	"	-20

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1059	SAMPLING ENDED AT: 1102
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: PE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-49	3	CG	40mL	HCL	—	—	8260B	RFPP	~80

REMARKS: Sampled @ (1059)

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: February 12, 2009

June 23, 2015 Service Request No:J1504166

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: Building M7-505

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory May 21, 2015
For your reference, these analyses have been assigned our service request number **J1504166.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

ADDRESS 9143 Philips Highway, Suite 200, Jacksonville, FL 32256
PHONE +1 904 739 2277 | FAX +1 904 739 2011
ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-EB-20120520	Lab ID: J1504166-001					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Methylene Chloride	0.32	IV	0.21	5.0	ug/L	8260B

CLIENT ID: M505-MW003I-030.0-20150519	Lab ID: J1504166-002					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	750				uMHOS/c	120.1
pH, Field	6.97				pH Units	150.1
Temperature, Field	26.6				deg C	170.1
Turbidity, Field	8.44				NTU	180.1
Depth	7.85				Feet	Depth Field
Dissolved Oxygen, Field	0.21		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0004S-009.0-20150519	Lab ID: J1504166-003					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	516				uMHOS/c	120.1
pH, Field	6.58				pH Units	150.1
Temperature, Field	27.5				deg C	170.1
Turbidity, Field	4.08				NTU	180.1
Depth	6.40				Feet	Depth Field
Dissolved Oxygen, Field	0.81		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0005-030.0-20150520	Lab ID: J1504166-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3596				uMHOS/c	120.1
pH, Field	6.60				pH Units	150.1
Temperature, Field	27.9				deg C	170.1
Turbidity, Field	19.1				NTU	180.1
cis-1,2-Dichloroethene	2.0		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.40	I	0.19	1.0	ug/L	8260B
Depth	7.45				Feet	Depth Field
Dissolved Oxygen, Field	0.21		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0007I-030.0-20150519	Lab ID: J1504166-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2304				uMHOS/c	120.1
pH, Field	6.67				pH Units	150.1
Temperature, Field	27.1				deg C	170.1
Turbidity, Field	8.06				NTU	180.1
cis-1,2-Dichloroethene	4.1		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.81	I	0.19	1.0	ug/L	8260B
Depth	7.31				Feet	Depth Field
Dissolved Oxygen, Field	0.17		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0010IS-025.5-20150519	Lab ID: J1504166-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2510				uMHOS/c	120.1
pH, Field	6.85				pH Units	150.1
Temperature, Field	27.4				deg C	170.1
Turbidity, Field	4.96				NTU	180.1
Acetone	8.8	I	5.6	50	ug/L	8260B
Depth	7.43				Feet	Depth Field
Dissolved Oxygen, Field	3.3		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0013IS-025.5-20150519	Lab ID: J1504166-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2835				uMHOS/c	120.1
pH, Field	6.98				pH Units	150.1
Temperature, Field	25.9				deg C	170.1
Turbidity, Field	2.06				NTU	180.1
Depth	7.88				Feet	Depth Field
Dissolved Oxygen, Field	4.1		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0016-036.0-20150519	Lab ID: J1504166-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3417				uMHOS/c	120.1
pH, Field	6.77				pH Units	150.1
Temperature, Field	28.0				deg C	170.1
Turbidity, Field	5.87				NTU	180.1
cis-1,2-Dichloroethene	33		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.7		0.19	1.0	ug/L	8260B
Dissolved Oxygen, Field	0.55		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0018-039.0-20150519	Lab ID: J1504166-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3354				uMHOS/c	120.1
pH, Field	6.64				pH Units	150.1
Temperature, Field	26.6				deg C	170.1
Turbidity, Field	9.62				NTU	180.1
cis-1,2-Dichloroethene	23		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.0		0.19	1.0	ug/L	8260B
Depth	7.44				Feet	Depth Field
Dissolved Oxygen, Field	0.24		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0019-025.0-20150520	Lab ID: J1504166-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3504				uMHOS/c	120.1
pH, Field	6.77				pH Units	150.1
Temperature, Field	28.6				deg C	170.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0019-025.0-20150520	Lab ID: J1504166-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Turbidity, Field	5.24				NTU	180.1
cis-1,2-Dichloroethene	22		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.2		0.19	1.0	ug/L	8260B
Depth	7.63				Feet	Depth Field
Dissolved Oxygen, Field	0.39		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0020-036.0-20150520	Lab ID: J1504166-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3892				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	28.0				deg C	170.1
Turbidity, Field	9.14				NTU	180.1
cis-1,2-Dichloroethene	160		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	6.8		0.19	1.0	ug/L	8260B
Vinyl Chloride	0.42	I	0.36	1.0	ug/L	8260B
Depth	7.71				Feet	Depth Field
Dissolved Oxygen, Field	0.16		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0021-025.5-20150519	Lab ID: J1504166-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1114				uMHOS/c	120.1
pH, Field	7.06				pH Units	150.1
Temperature, Field	26.3				deg C	170.1
Turbidity, Field	0.11				NTU	180.1
cis-1,2-Dichloroethene	0.38	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	1.6		0.36	1.0	ug/L	8260B
Depth	4.47				Feet	Depth Field
Dissolved Oxygen, Field	0.16		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0023-025.0-20150519	Lab ID: J1504166-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2732				uMHOS/c	120.1
pH, Field	6.84				pH Units	150.1
Temperature, Field	25.7				deg C	170.1
Turbidity, Field	2.12				NTU	180.1
cis-1,2-Dichloroethene	0.93	I	0.36	1.0	ug/L	8260B
Depth	7.11				Feet	Depth Field
Dissolved Oxygen, Field	0.19		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0025-025.0-20150519	Lab ID: J1504166-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3468				uMHOS/c	120.1
pH, Field	6.58				pH Units	150.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0025-025.0-20150519	Lab ID: J1504166-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Temperature, Field	25.7				deg C	170.1
Turbidity, Field	0.77				NTU	180.1
cis-1,2-Dichloroethene	250		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	7.5		0.19	1.0	ug/L	8260B
Depth	9.15				Feet	Depth Field
Dissolved Oxygen, Field	0.38		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0027-025.0-20150520	Lab ID: J1504166-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1179				uMHOS/c	120.1
pH, Field	6.76				pH Units	150.1
Temperature, Field	27.8				deg C	170.1
Turbidity, Field	1.32				NTU	180.1
Acetone	17	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	0.67	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	1.7		0.36	1.0	ug/L	8260B
Depth	7.99				Feet	Depth Field
Dissolved Oxygen, Field	0.32		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0028-025.0-20150520	Lab ID: J1504166-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1166				uMHOS/c	120.1
pH, Field	6.89				pH Units	150.1
Temperature, Field	25.5				deg C	170.1
Turbidity, Field	1.04				NTU	180.1
cis-1,2-Dichloroethene	2.3		0.36	1.0	ug/L	8260B
Vinyl Chloride	83		0.36	1.0	ug/L	8260B
Depth	4.27				Feet	Depth Field
Dissolved Oxygen, Field	0.17		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0029-025.0-20150520	Lab ID: J1504166-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1552				uMHOS/c	120.1
pH, Field	7.07				pH Units	150.1
Temperature, Field	27.0				deg C	170.1
Turbidity, Field	0.61				NTU	180.1
Acetone	7.0	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	1.9		0.36	1.0	ug/L	8260B
Depth	5.80				Feet	Depth Field
Dissolved Oxygen, Field	0.36		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0030-025.0-20150520	Lab ID: J1504166-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1653				uMHOS/c	120.1
pH, Field	7.19				pH Units	150.1
Temperature, Field	26.7				deg C	170.1
Turbidity, Field	2.74				NTU	180.1
cis-1,2-Dichloroethene	17		0.36	1.0	ug/L	8260B
Depth	8.70				Feet	Depth Field
Dissolved Oxygen, Field	0.28		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0032-025.0-20150519	Lab ID: J1504166-019					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2623				uMHOS/c	120.1
pH, Field	6.82				pH Units	150.1
Temperature, Field	26.9				deg C	170.1
Turbidity, Field	1.26				NTU	180.1
cis-1,2-Dichloroethene	120		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.60	I	0.19	1.0	ug/L	8260B
Vinyl Chloride	11		0.36	1.0	ug/L	8260B
Depth	9.86				Feet	Depth Field
Dissolved Oxygen, Field	0.54		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0033-025.0-20150519	Lab ID: J1504166-020					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2654				uMHOS/c	120.1
pH, Field	6.72				pH Units	150.1
Temperature, Field	26.7				deg C	170.1
Turbidity, Field	3.91				NTU	180.1
Acetone	7.0	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	32		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.74	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.36	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	1.2		0.36	1.0	ug/L	8260B
Depth	9.21				Feet	Depth Field
Dissolved Oxygen, Field	0.47		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0035-025.0-20150519	Lab ID: J1504166-021					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2910				uMHOS/c	120.1
pH, Field	6.72				pH Units	150.1
Temperature, Field	28.2				deg C	170.1
Turbidity, Field	2.13				NTU	180.1
Acetone	6.0	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	66		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.8		0.19	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0035-025.0-20150519	Lab ID: J1504166-021					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Trichloroethene (TCE)	3.4		0.36	1.0	ug/L	8260B
Depth	5.59				Feet	Depth Field
Dissolved Oxygen, Field	0.23		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0039-032.5-20150520	Lab ID: J1504166-022					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3304				uMHOS/c	120.1
pH, Field	6.60				pH Units	150.1
Temperature, Field	25.9				deg C	170.1
Turbidity, Field	2.76				NTU	180.1
Acetone	6.0	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	6.5		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.1		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	6.1		0.36	1.0	ug/L	8260B
Depth	7.05				Feet	Depth Field
Dissolved Oxygen, Field	0.24		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0041-025.0-20150519	Lab ID: J1504166-023					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2263				uMHOS/c	120.1
pH, Field	6.55				pH Units	150.1
Temperature, Field	27.0				deg C	170.1
Turbidity, Field	2.42				NTU	180.1
Acetone	5.8	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	6.1		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.39	I	0.19	1.0	ug/L	8260B
Depth	7.32				Feet	Depth Field
Dissolved Oxygen, Field	0.20		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0042-035.0-20150519	Lab ID: J1504166-024					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3141				uMHOS/c	120.1
pH, Field	6.65				pH Units	150.1
Temperature, Field	26.7				deg C	170.1
Turbidity, Field	3.97				NTU	180.1
1,1-Dichloroethene (1,1-DCE)	0.20	I	0.16	1.0	ug/L	8260B
cis-1,2-Dichloroethene	49		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	2.4		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	9.0		0.36	1.0	ug/L	8260B
Depth	7.35				Feet	Depth Field
Dissolved Oxygen, Field	0.17		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0044-027.5-20150520	Lab ID: J1504166-025					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3511				uMHOS/c	120.1
pH, Field	6.60				pH Units	150.1
Temperature, Field	26.6				deg C	170.1
Turbidity, Field	6.82				NTU	180.1
cis-1,2-Dichloroethene	1.4		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.31	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	1.1		0.36	1.0	ug/L	8260B
Depth	6.65				Feet	Depth Field
Dissolved Oxygen, Field	0.11		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0045-034.5-20150519	Lab ID: J1504166-026					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3445				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	26.5				deg C	170.1
Turbidity, Field	1.87				NTU	180.1
cis-1,2-Dichloroethene	36		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.8		0.19	1.0	ug/L	8260B
Depth	7.37				Feet	Depth Field
Dissolved Oxygen, Field	0.31		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0048-027.5-20150519	Lab ID: J1504166-027					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3275				uMHOS/c	120.1
pH, Field	6.60				pH Units	150.1
Temperature, Field	27.6				deg C	170.1
Turbidity, Field	18.2				NTU	180.1
Acetone	8.3	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	55		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.8		0.19	1.0	ug/L	8260B
Vinyl Chloride	0.45	I	0.36	1.0	ug/L	8260B
Depth	7.28				Feet	Depth Field
Dissolved Oxygen, Field	0.29		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0049-027.5-20150519	Lab ID: J1504166-028					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2660				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	26.6				deg C	170.1
Turbidity, Field	0.76				NTU	180.1
cis-1,2-Dichloroethene	79		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.6		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.61	I	0.36	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0049-027.5-20150519	Lab ID: J1504166-028					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Depth	9.54				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0051-025.0-20150519	Lab ID: J1504166-029					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3138				uMHOS/c	120.1
pH, Field	7.07				pH Units	150.1
Temperature, Field	25.6				deg C	170.1
Turbidity, Field	0.69				NTU	180.1
cis-1,2-Dichloroethene	6.0		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.56	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.70	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	5.6		0.36	1.0	ug/L	8260B
Depth	8.61				Feet	Depth Field
Dissolved Oxygen, Field	0.15		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0052-010.0-20150519	Lab ID: J1504166-030					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	374				uMHOS/c	120.1
pH, Field	6.00				pH Units	150.1
Temperature, Field	24.3				deg C	170.1
Turbidity, Field	7.7				NTU	180.1
cis-1,2-Dichloroethene	19		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.51	I	0.19	1.0	ug/L	8260B
Vinyl Chloride	1.5		0.36	1.0	ug/L	8260B
Depth	8.34				Feet	Depth Field
Dissolved Oxygen, Field	0.27		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0053-010.0-20150519	Lab ID: J1504166-031					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2873				uMHOS/c	120.1
pH, Field	7.19				pH Units	150.1
Temperature, Field	24.6				deg C	170.1
Turbidity, Field	0.49				NTU	180.1
cis-1,2-Dichloroethene	6.3		0.36	1.0	ug/L	8260B
Depth	7.10				Feet	Depth Field
Dissolved Oxygen, Field	6.3		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0055-025.0-20150519	Lab ID: J1504166-032					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3806				uMHOS/c	120.1
pH, Field	6.74				pH Units	150.1
Temperature, Field	24.3				deg C	170.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0055-025.0-20150519	Lab ID: J1504166-032					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Turbidity, Field	0.45				NTU	180.1
Depth	8.24				Feet	Depth Field
Dissolved Oxygen, Field	0.33		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0056-010.0-20150520	Lab ID: J1504166-033					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	534				uMHOS/c	120.1
pH, Field	6.37				pH Units	150.1
Temperature, Field	25.4				deg C	170.1
Turbidity, Field	2.17				NTU	180.1
Acetone	16	I	5.6	50	ug/L	8260B
Depth	5.62				Feet	Depth Field
Dissolved Oxygen, Field	0.29		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0057-025.0-20150520	Lab ID: J1504166-034					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1249				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	26.1				deg C	170.1
Turbidity, Field	2.19				NTU	180.1
Vinyl Chloride	65		0.36	1.0	ug/L	8260B
Depth	5.40				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0058-010.0-20150519	Lab ID: J1504166-035					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	372				uMHOS/c	120.1
pH, Field	5.99				pH Units	150.1
Temperature, Field	29.4				deg C	170.1
Turbidity, Field	2.89				NTU	180.1
cis-1,2-Dichloroethene	0.80	I	0.36	1.0	ug/L	8260B
Depth	4.60				Feet	Depth Field
Dissolved Oxygen, Field	0.29		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0059-025.0-20150519	Lab ID: J1504166-036					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1166				uMHOS/c	120.1
pH, Field	6.61				pH Units	150.1
Temperature, Field	26.5				deg C	170.1
Turbidity, Field	0.84				NTU	180.1
Vinyl Chloride	22		0.36	1.0	ug/L	8260B
Depth	5.27				Feet	Depth Field
Dissolved Oxygen, Field	0.20		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: Trip Blank	Lab ID: J1504166-037					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Acetone	6.0	I	5.6	50	ug/L	8260B
Methylene Chloride	0.63	IV	0.21	5.0	ug/L	8260B

CLIENT ID: M505-MW0040-022.5-20120520	Lab ID: J1504166-038					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1447				uMHOS/c	120.1
pH, Field	6.78				pH Units	150.1
Temperature, Field	26.2				deg C	170.1
Turbidity, Field	3.64				NTU	180.1
Acetone	7.8	I	5.6	50	ug/L	8260B
cis-1,2-Dichloroethene	1.5		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.31	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	1.9		0.36	1.0	ug/L	8260B
Depth	7.20				Feet	Depth Field
Dissolved Oxygen, Field	0.21		0.10	0.10	mg/L	SM 4500-O

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Client: Levine Fricke
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

Service Request:J1504166
Date Received:5/21/15

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier II data deliverables, including results of QC samples analyzed from this delivery group. When appropriate to the procedure, method blank results have been reported with each analytical test. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Parameters that are included in the NELAC Fields of Testing but are not included in the lab's NELAC accreditation are identified in the discussion of each analytical procedure.

Sample Receipt

Thirty-eight water samples were received for analysis at ALS Environmental on 5-21-15. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at ≤6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

Project Notes and Discussion:

For sample J1504166-030 (M505-MW0052-010.0-20150519) the raw result for Vinyl Chloride off the instrument is 1.48 ug/L. Due to ALS QA and rounding policies, the final result is reported as 1.5 ug/L.

Volatile Organic Analyses:

Method 8260B: Method Blank JQ1503976-03 contained a low level of Methylene Chloride above the Method Detection Limit (MDL), but less than the PQL. Only sample J1504166-001 (M505-EB) exhibited this anlayte in approximately the same concentration as the method blank. The data is flagged with a qualifier to indicate the results are estimated values. The method blank results may indicate the potential for a false positive.

Method 8260B: Method Blank JQ1503977-03 contained a low level of Methylene Chloride above the Method Detection Limit (MDL), but less than the PQL. Only sample J1504166-037 (Trip Blank) exhibited this analyte in approximately the same concentration as the method blank. The data is flagged with a qualifier to indicate the results are estimated values. The method blank results may indicate the potential for a false positive.

Approved by _____ Date 6/23/2015

State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	9/20/2016
Florida Department of Health	E82502	6/30/2015
Georgia Department of Natural Resources	958	6/30/2015
Kentucky Division of Waste Management	63	6/30/2015
Louisiana Department of Environmental Quality	02086	6/30/2015
Maine Department of Health and Human Services	2015002	2/3/2017
North Carolina Department of Environment and Natural Resources	527	12/31/2015
Pennsylvania Department of Environmental Protection	68-04835	8/31/2015
South Carolina Department of Health and Environmental Control	96021001	6/30/2015
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2016
Virginia Environmental Accreditation Program	460191	12/14/2015

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1504166-001	M505-EB-20120520	5/20/2015	1400
J1504166-002	M505-MW003I-030.0-20150519	5/19/2015	1301
J1504166-003	M505-MW0004S-009.0-20150519	5/19/2015	1224
J1504166-004	M505-MW0005-030.0-20150520	5/20/2015	1328
J1504166-005	M505-MW0007I-030.0-20150519	5/19/2015	1052
J1504166-006	M505-MW0010IS-025.5-20150519	5/19/2015	1135
J1504166-007	M505-MW0013IS-025.5-20150519	5/19/2015	1627
J1504166-008	M505-MW0016-036.0-20150519	5/19/2015	1705
J1504166-009	M505-MW0018-039.0-20150519	5/19/2015	1551
J1504166-010	M505-MW0019-025.0-20150520	5/20/2015	1237
J1504166-011	M505-MW0020-036.0-20150520	5/20/2015	1153
J1504166-012	M505-MW0021-025.5-20150519	5/19/2015	1657
J1504166-013	M505-MW0023-025.0-20150519	5/19/2015	1742
J1504166-014	M505-MW0025-025.0-20150519	5/19/2015	1505
J1504166-015	M505-MW0027-025.0-20150520	5/20/2015	1145
J1504166-016	M505-MW0028-025.0-20150520	5/20/2015	1053
J1504166-017	M505-MW0029-025.0-20150520	5/20/2015	1334
J1504166-018	M505-MW0030-025.0-20150520	5/20/2015	1221
J1504166-019	M505-MW0032-025.0-20150519	5/19/2015	1240
J1504166-020	M505-MW0033-025.0-20150519	5/19/2015	1213
J1504166-021	M505-MW0035-025.0-20150519	5/19/2015	1318
J1504166-022	M505-MW0039-032.5-20150520	5/20/2015	0947
J1504166-023	M505-MW0041-025.0-20150519	5/19/2015	1344
J1504166-024	M505-MW0042-035.0-20150519	5/19/2015	1419
J1504166-025	M505-MW0044-027.5-20150520	5/20/2015	1106
J1504166-026	M505-MW0045-034.5-20150519	5/19/2015	1007
J1504166-027	M505-MW0048-027.5-20150519	5/19/2015	1551
J1504166-028	M505-MW0049-027.5-20150519	5/19/2015	1429
J1504166-029	M505-MW0051-025.0-20150519	5/19/2015	1137
J1504166-030	M505-MW0052-010.0-20150519	5/19/2015	1028
J1504166-031	M505-MW0053-010.0-20150519	5/19/2015	1059
J1504166-032	M505-MW0055-025.0-20150519	5/19/2015	0949
J1504166-033	M505-MW0056-010.0-20150520	5/20/2015	0944
J1504166-034	M505-MW0057-025.0-20150520	5/19/2015	1016
J1504166-035	M505-MW0058-010.0-20150519	5/19/2015	1617
J1504166-036	M505-MW0059-025.0-20150519	5/19/2015	1543
J1504166-037	Trip Blank	5/19/2015	0000
J1504166-038	M505-MW0040-022.5-20120520	5/20/2015	1022

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 14:00
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-EB-20120520	**Units:**	ug/L
Lab Code:	J1504166-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 17:01	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 17:01	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 17:01	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 17:01	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 17:01	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 17:01	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 17:01	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 17:01	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 17:01	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 17:01	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 17:01	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 17:01	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 17:01	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 17:01	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:01	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 17:01	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 17:01	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 17:01	
Acetone	5.6 U	50	5.6	1	05/28/15 17:01	
Benzene	0.21 U	1.0	0.21	1	05/28/15 17:01	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 17:01	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 17:01	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 17:01	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 17:01	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 17:01	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 17:01	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:01	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 17:01	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 17:01	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 17:01	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/28/15 17:01	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 17:01	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 17:01	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 17:01	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 17:01	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 17:01	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 17:01	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 17:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 14:00
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-EB-20120520	**Units:**	ug/L
Lab Code:	J1504166-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 17:01	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 17:01	
Methylene Chloride	**0.32 IV**	5.0	0.21	1	05/28/15 17:01	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 17:01	
Styrene	0.29 U	1.0	0.29	1	05/28/15 17:01	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 17:01	
Toluene	0.19 U	1.0	0.19	1	05/28/15 17:01	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 17:01	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 17:01	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 17:01	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 17:01	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 17:01	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 17:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	05/28/15 17:01	
4-Bromofluorobenzene	97	86 - 113	05/28/15 17:01	
Dibromofluoromethane	103	86 - 112	05/28/15 17:01	
Toluene-d8	97	88 - 115	05/28/15 17:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:01
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW003I-030.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 17:25	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 17:25	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 17:25	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 17:25	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 17:25	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 17:25	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 17:25	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 17:25	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 17:25	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 17:25	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 17:25	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 17:25	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 17:25	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 17:25	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:25	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 17:25	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 17:25	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 17:25	
Acetone	5.6 U	50	5.6	1	05/28/15 17:25	
Benzene	0.21 U	1.0	0.21	1	05/28/15 17:25	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 17:25	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 17:25	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 17:25	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 17:25	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 17:25	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 17:25	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:25	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 17:25	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 17:25	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 17:25	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/28/15 17:25	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 17:25	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 17:25	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 17:25	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 17:25	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 17:25	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 17:25	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 17:25	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:01
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW003I-030.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 17:25	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 17:25	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 17:25	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 17:25	
Styrene	0.29 U	1.0	0.29	1	05/28/15 17:25	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 17:25	
Toluene	0.19 U	1.0	0.19	1	05/28/15 17:25	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 17:25	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 17:25	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 17:25	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 17:25	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 17:25	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 17:25	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	05/28/15 17:25	
4-Bromofluorobenzene	95	86 - 113	05/28/15 17:25	
Dibromofluoromethane	103	86 - 112	05/28/15 17:25	
Toluene-d8	96	88 - 115	05/28/15 17:25	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:24
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0004S-009.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 17:50	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 17:50	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 17:50	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 17:50	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 17:50	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 17:50	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 17:50	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 17:50	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 17:50	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 17:50	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 17:50	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 17:50	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 17:50	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 17:50	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:50	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 17:50	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 17:50	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 17:50	
Acetone	5.6 U	50	5.6	1	05/28/15 17:50	
Benzene	0.21 U	1.0	0.21	1	05/28/15 17:50	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 17:50	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 17:50	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 17:50	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 17:50	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 17:50	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 17:50	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 17:50	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 17:50	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 17:50	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 17:50	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/28/15 17:50	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 17:50	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 17:50	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 17:50	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 17:50	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 17:50	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 17:50	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 17:50	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:24
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0004S-009.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 17:50	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 17:50	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 17:50	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 17:50	
Styrene	0.29 U	1.0	0.29	1	05/28/15 17:50	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 17:50	
Toluene	0.19 U	1.0	0.19	1	05/28/15 17:50	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 17:50	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 17:50	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 17:50	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 17:50	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 17:50	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 17:50	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	108	72 - 121	05/28/15 17:50	
4-Bromofluorobenzene	96	86 - 113	05/28/15 17:50	
Dibromofluoromethane	104	86 - 112	05/28/15 17:50	
Toluene-d8	96	88 - 115	05/28/15 17:50	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 13:28
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0005-030.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 18:14	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 18:14	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 18:14	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 18:14	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 18:14	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 18:14	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 18:14	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 18:14	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 18:14	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 18:14	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 18:14	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 18:14	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 18:14	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 18:14	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 18:14	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 18:14	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 18:14	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 18:14	
Acetone	5.6 U	50	5.6	1	05/28/15 18:14	
Benzene	0.21 U	1.0	0.21	1	05/28/15 18:14	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 18:14	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 18:14	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 18:14	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 18:14	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 18:14	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 18:14	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 18:14	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 18:14	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 18:14	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 18:14	
cis-1,2-Dichloroethene	**2.0**	1.0	0.36	1	05/28/15 18:14	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 18:14	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 18:14	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 18:14	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 18:14	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 18:14	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 18:14	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 18:14	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 13:28
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0005-030.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/28/15 18:14	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/28/15 18:14	
Methylene Chloride	0.21	U	5.0	0.21	1	05/28/15 18:14	
o-Xylene	0.14	U	1.0	0.14	1	05/28/15 18:14	
Styrene	0.29	U	1.0	0.29	1	05/28/15 18:14	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/28/15 18:14	
Toluene	0.19	U	1.0	0.19	1	05/28/15 18:14	
trans-1,2-Dichloroethene	**0.40**	**I**	1.0	0.19	1	05/28/15 18:14	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/28/15 18:14	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/28/15 18:14	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/28/15 18:14	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/28/15 18:14	
Vinyl Chloride	0.36	U	1.0	0.36	1	05/28/15 18:14	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	05/28/15 18:14	
4-Bromofluorobenzene	96	86 - 113	05/28/15 18:14	
Dibromofluoromethane	104	86 - 112	05/28/15 18:14	
Toluene-d8	95	88 - 115	05/28/15 18:14	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:52
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0007I-030.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 18:38	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 18:38	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 18:38	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 18:38	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 18:38	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 18:38	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 18:38	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 18:38	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 18:38	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 18:38	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 18:38	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 18:38	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 18:38	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 18:38	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 18:38	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 18:38	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 18:38	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 18:38	
Acetone	5.6 U	50	5.6	1	05/28/15 18:38	
Benzene	0.21 U	1.0	0.21	1	05/28/15 18:38	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 18:38	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 18:38	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 18:38	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 18:38	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 18:38	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 18:38	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 18:38	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 18:38	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 18:38	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 18:38	
cis-1,2-Dichloroethene	**4.1**	1.0	0.36	1	05/28/15 18:38	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 18:38	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 18:38	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 18:38	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 18:38	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 18:38	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 18:38	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 18:38	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:52
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0007I-030.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 18:38	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 18:38	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 18:38	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 18:38	
Styrene	0.29 U	1.0	0.29	1	05/28/15 18:38	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 18:38	
Toluene	0.19 U	1.0	0.19	1	05/28/15 18:38	
trans-1,2-Dichloroethene	**0.81 I**	1.0	0.19	1	05/28/15 18:38	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 18:38	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 18:38	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 18:38	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 18:38	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 18:38	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	05/28/15 18:38	
4-Bromofluorobenzene	94	86 - 113	05/28/15 18:38	
Dibromofluoromethane	103	86 - 112	05/28/15 18:38	
Toluene-d8	98	88 - 115	05/28/15 18:38	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 11:35
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0010IS-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/28/15 19:03	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/28/15 19:03	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/28/15 19:03	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/28/15 19:03	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/28/15 19:03	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/28/15 19:03	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/28/15 19:03	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/28/15 19:03	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/28/15 19:03	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/28/15 19:03	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/28/15 19:03	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/28/15 19:03	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/28/15 19:03	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/28/15 19:03	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/28/15 19:03	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/28/15 19:03	
2-Hexanone	2.2	U	25	2.2	1	05/28/15 19:03	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/28/15 19:03	
Acetone	**8.8**	**I**	50	5.6	1	05/28/15 19:03	
Benzene	0.21	U	1.0	0.21	1	05/28/15 19:03	
Bromochloromethane	0.27	U	5.0	0.27	1	05/28/15 19:03	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/28/15 19:03	
Bromoform	0.42	U	2.0	0.42	1	05/28/15 19:03	
Bromomethane	0.23	U	5.0	0.23	1	05/28/15 19:03	
Carbon Disulfide	2.4	U	10	2.4	1	05/28/15 19:03	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/28/15 19:03	
Chlorobenzene	0.16	U	1.0	0.16	1	05/28/15 19:03	
Chloroethane	0.52	U	5.0	0.52	1	05/28/15 19:03	
Chloroform	0.35	U	1.0	0.35	1	05/28/15 19:03	
Chloromethane	0.36	U	1.0	0.36	1	05/28/15 19:03	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	05/28/15 19:03	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/28/15 19:03	
Cyclohexane	0.24	U	10	0.24	1	05/28/15 19:03	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/28/15 19:03	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/28/15 19:03	
Ethylbenzene	0.21	U	1.0	0.21	1	05/28/15 19:03	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/28/15 19:03	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/28/15 19:03	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 11:35
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0010IS-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 19:03	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 19:03	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 19:03	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 19:03	
Styrene	0.29 U	1.0	0.29	1	05/28/15 19:03	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 19:03	
Toluene	0.19 U	1.0	0.19	1	05/28/15 19:03	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 19:03	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 19:03	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 19:03	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 19:03	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 19:03	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 19:03	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	108	72 - 121	05/28/15 19:03	
4-Bromofluorobenzene	95	86 - 113	05/28/15 19:03	
Dibromofluoromethane	101	86 - 112	05/28/15 19:03	
Toluene-d8	98	88 - 115	05/28/15 19:03	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:27
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0013IS-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 19:27	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 19:27	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 19:27	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 19:27	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 19:27	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 19:27	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 19:27	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 19:27	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 19:27	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 19:27	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 19:27	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 19:27	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 19:27	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 19:27	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 19:27	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 19:27	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 19:27	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 19:27	
Acetone	5.6 U	50	5.6	1	05/28/15 19:27	
Benzene	0.21 U	1.0	0.21	1	05/28/15 19:27	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 19:27	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 19:27	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 19:27	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 19:27	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 19:27	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 19:27	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 19:27	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 19:27	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 19:27	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 19:27	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/28/15 19:27	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 19:27	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 19:27	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 19:27	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 19:27	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 19:27	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 19:27	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 19:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:27
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0013IS-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 19:27	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 19:27	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 19:27	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 19:27	
Styrene	0.29 U	1.0	0.29	1	05/28/15 19:27	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 19:27	
Toluene	0.19 U	1.0	0.19	1	05/28/15 19:27	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 19:27	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 19:27	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 19:27	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 19:27	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 19:27	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 19:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	05/28/15 19:27	
4-Bromofluorobenzene	96	86 - 113	05/28/15 19:27	
Dibromofluoromethane	103	86 - 112	05/28/15 19:27	
Toluene-d8	95	88 - 115	05/28/15 19:27	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 17:05
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0016-036.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 19:52	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 19:52	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 19:52	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 19:52	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 19:52	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 19:52	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 19:52	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 19:52	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 19:52	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 19:52	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 19:52	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 19:52	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 19:52	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 19:52	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 19:52	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 19:52	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 19:52	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 19:52	
Acetone	5.6 U	50	5.6	1	05/28/15 19:52	
Benzene	0.21 U	1.0	0.21	1	05/28/15 19:52	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 19:52	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 19:52	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 19:52	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 19:52	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 19:52	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 19:52	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 19:52	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 19:52	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 19:52	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 19:52	
cis-1,2-Dichloroethene	**33**	1.0	0.36	1	05/28/15 19:52	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 19:52	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 19:52	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 19:52	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 19:52	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 19:52	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 19:52	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 19:52	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 17:05
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0016-036.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 19:52	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 19:52	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 19:52	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 19:52	
Styrene	0.29 U	1.0	0.29	1	05/28/15 19:52	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 19:52	
Toluene	0.19 U	1.0	0.19	1	05/28/15 19:52	
trans-1,2-Dichloroethene	**1.7**	1.0	0.19	1	05/28/15 19:52	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 19:52	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 19:52	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 19:52	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 19:52	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 19:52	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/28/15 19:52	
4-Bromofluorobenzene	95	86 - 113	05/28/15 19:52	
Dibromofluoromethane	105	86 - 112	05/28/15 19:52	
Toluene-d8	94	88 - 115	05/28/15 19:52	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:51
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0018-039.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 20:16	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 20:16	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 20:16	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 20:16	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 20:16	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 20:16	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 20:16	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 20:16	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 20:16	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 20:16	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 20:16	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 20:16	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 20:16	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 20:16	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 20:16	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 20:16	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 20:16	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 20:16	
Acetone	5.6 U	50	5.6	1	05/28/15 20:16	
Benzene	0.21 U	1.0	0.21	1	05/28/15 20:16	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 20:16	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 20:16	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 20:16	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 20:16	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 20:16	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 20:16	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 20:16	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 20:16	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 20:16	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 20:16	
cis-1,2-Dichloroethene	**23**	1.0	0.36	1	05/28/15 20:16	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 20:16	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 20:16	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 20:16	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 20:16	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 20:16	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 20:16	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 20:16	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:51
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0018-039.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 20:16	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 20:16	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 20:16	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 20:16	
Styrene	0.29 U	1.0	0.29	1	05/28/15 20:16	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 20:16	
Toluene	0.19 U	1.0	0.19	1	05/28/15 20:16	
trans-1,2-Dichloroethene	**1.0**	1.0	0.19	1	05/28/15 20:16	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 20:16	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 20:16	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 20:16	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 20:16	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 20:16	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/28/15 20:16	
4-Bromofluorobenzene	96	86 - 113	05/28/15 20:16	
Dibromofluoromethane	103	86 - 112	05/28/15 20:16	
Toluene-d8	95	88 - 115	05/28/15 20:16	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 12:37
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0019-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 20:41	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 20:41	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 20:41	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 20:41	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 20:41	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 20:41	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 20:41	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 20:41	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 20:41	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 20:41	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 20:41	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 20:41	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 20:41	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 20:41	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 20:41	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 20:41	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 20:41	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 20:41	
Acetone	5.6 U	50	5.6	1	05/28/15 20:41	
Benzene	0.21 U	1.0	0.21	1	05/28/15 20:41	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 20:41	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 20:41	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 20:41	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 20:41	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 20:41	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 20:41	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 20:41	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 20:41	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 20:41	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 20:41	
cis-1,2-Dichloroethene	**22**	1.0	0.36	1	05/28/15 20:41	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 20:41	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 20:41	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 20:41	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 20:41	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 20:41	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 20:41	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 20:41	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 12:37
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0019-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 20:41	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 20:41	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 20:41	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 20:41	
Styrene	0.29 U	1.0	0.29	1	05/28/15 20:41	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 20:41	
Toluene	0.19 U	1.0	0.19	1	05/28/15 20:41	
trans-1,2-Dichloroethene	**1.2**	1.0	0.19	1	05/28/15 20:41	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 20:41	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 20:41	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 20:41	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 20:41	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 20:41	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/28/15 20:41	
4-Bromofluorobenzene	99	86 - 113	05/28/15 20:41	
Dibromofluoromethane	106	86 - 112	05/28/15 20:41	
Toluene-d8	95	88 - 115	05/28/15 20:41	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:53
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0020-036.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 21:05	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 21:05	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 21:05	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 21:05	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 21:05	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 21:05	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 21:05	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 21:05	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 21:05	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 21:05	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 21:05	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 21:05	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 21:05	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 21:05	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 21:05	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 21:05	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 21:05	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 21:05	
Acetone	5.6 U	50	5.6	1	05/28/15 21:05	
Benzene	0.21 U	1.0	0.21	1	05/28/15 21:05	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 21:05	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 21:05	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 21:05	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 21:05	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 21:05	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 21:05	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 21:05	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 21:05	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 21:05	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 21:05	
cis-1,2-Dichloroethene	**160**	1.0	0.36	1	05/28/15 21:05	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 21:05	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 21:05	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 21:05	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 21:05	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 21:05	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 21:05	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 21:05	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:53
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0020-036.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/28/15 21:05	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/28/15 21:05	
Methylene Chloride	0.21	U	5.0	0.21	1	05/28/15 21:05	
o-Xylene	0.14	U	1.0	0.14	1	05/28/15 21:05	
Styrene	0.29	U	1.0	0.29	1	05/28/15 21:05	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/28/15 21:05	
Toluene	0.19	U	1.0	0.19	1	05/28/15 21:05	
trans-1,2-Dichloroethene	**6.8**		1.0	0.19	1	05/28/15 21:05	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/28/15 21:05	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/28/15 21:05	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/28/15 21:05	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/28/15 21:05	
Vinyl Chloride	**0.42**	**I**	1.0	0.36	1	05/28/15 21:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	05/28/15 21:05	
4-Bromofluorobenzene	96	86 - 113	05/28/15 21:05	
Dibromofluoromethane	106	86 - 112	05/28/15 21:05	
Toluene-d8	96	88 - 115	05/28/15 21:05	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:57
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0021-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 21:29	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 21:29	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 21:29	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 21:29	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 21:29	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 21:29	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 21:29	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 21:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 21:29	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 21:29	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 21:29	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 21:29	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 21:29	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 21:29	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 21:29	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 21:29	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 21:29	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 21:29	
Acetone	5.6 U	50	5.6	1	05/28/15 21:29	
Benzene	0.21 U	1.0	0.21	1	05/28/15 21:29	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 21:29	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 21:29	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 21:29	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 21:29	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 21:29	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 21:29	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 21:29	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 21:29	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 21:29	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 21:29	
cis-1,2-Dichloroethene	**0.38 I**	1.0	0.36	1	05/28/15 21:29	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 21:29	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 21:29	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 21:29	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 21:29	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 21:29	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 21:29	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 21:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:57
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0021-025.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 21:29	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 21:29	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 21:29	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 21:29	
Styrene	0.29 U	1.0	0.29	1	05/28/15 21:29	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 21:29	
Toluene	0.19 U	1.0	0.19	1	05/28/15 21:29	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 21:29	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 21:29	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 21:29	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 21:29	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 21:29	
Vinyl Chloride	**1.6**	1.0	0.36	1	05/28/15 21:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	05/28/15 21:29	
4-Bromofluorobenzene	96	86 - 113	05/28/15 21:29	
Dibromofluoromethane	103	86 - 112	05/28/15 21:29	
Toluene-d8	97	88 - 115	05/28/15 21:29	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 17:42
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0023-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/28/15 21:54	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/28/15 21:54	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/28/15 21:54	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/28/15 21:54	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/28/15 21:54	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/28/15 21:54	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/28/15 21:54	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/28/15 21:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/28/15 21:54	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/28/15 21:54	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/28/15 21:54	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/28/15 21:54	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/28/15 21:54	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/28/15 21:54	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/28/15 21:54	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/28/15 21:54	
2-Hexanone	2.2	U	25	2.2	1	05/28/15 21:54	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/28/15 21:54	
Acetone	5.6	U	50	5.6	1	05/28/15 21:54	
Benzene	0.21	U	1.0	0.21	1	05/28/15 21:54	
Bromochloromethane	0.27	U	5.0	0.27	1	05/28/15 21:54	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/28/15 21:54	
Bromoform	0.42	U	2.0	0.42	1	05/28/15 21:54	
Bromomethane	0.23	U	5.0	0.23	1	05/28/15 21:54	
Carbon Disulfide	2.4	U	10	2.4	1	05/28/15 21:54	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/28/15 21:54	
Chlorobenzene	0.16	U	1.0	0.16	1	05/28/15 21:54	
Chloroethane	0.52	U	5.0	0.52	1	05/28/15 21:54	
Chloroform	0.35	U	1.0	0.35	1	05/28/15 21:54	
Chloromethane	0.36	U	1.0	0.36	1	05/28/15 21:54	
cis-1,2-Dichloroethene	**0.93**	**I**	1.0	0.36	1	05/28/15 21:54	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/28/15 21:54	
Cyclohexane	0.24	U	10	0.24	1	05/28/15 21:54	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/28/15 21:54	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/28/15 21:54	
Ethylbenzene	0.21	U	1.0	0.21	1	05/28/15 21:54	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/28/15 21:54	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/28/15 21:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 17:42
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0023-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 21:54	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 21:54	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 21:54	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 21:54	
Styrene	0.29 U	1.0	0.29	1	05/28/15 21:54	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 21:54	
Toluene	0.19 U	1.0	0.19	1	05/28/15 21:54	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 21:54	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 21:54	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 21:54	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 21:54	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 21:54	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 21:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	05/28/15 21:54	
4-Bromofluorobenzene	96	86 - 113	05/28/15 21:54	
Dibromofluoromethane	103	86 - 112	05/28/15 21:54	
Toluene-d8	94	88 - 115	05/28/15 21:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:05
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0025-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 22:18	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 22:18	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 22:18	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 22:18	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 22:18	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 22:18	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 22:18	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 22:18	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 22:18	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 22:18	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 22:18	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 22:18	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 22:18	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 22:18	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 22:18	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 22:18	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 22:18	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 22:18	
Acetone	5.6 U	50	5.6	1	05/28/15 22:18	
Benzene	0.21 U	1.0	0.21	1	05/28/15 22:18	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 22:18	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 22:18	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 22:18	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 22:18	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 22:18	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 22:18	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 22:18	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 22:18	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 22:18	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 22:18	
cis-1,2-Dichloroethene	**250**	1.0	0.36	1	05/28/15 22:18	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 22:18	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 22:18	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 22:18	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 22:18	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 22:18	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 22:18	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 22:18	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:05
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0025-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 22:18	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 22:18	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 22:18	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 22:18	
Styrene	0.29 U	1.0	0.29	1	05/28/15 22:18	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 22:18	
Toluene	0.19 U	1.0	0.19	1	05/28/15 22:18	
trans-1,2-Dichloroethene	**7.5**	1.0	0.19	1	05/28/15 22:18	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 22:18	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 22:18	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 22:18	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 22:18	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 22:18	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/28/15 22:18	
4-Bromofluorobenzene	98	86 - 113	05/28/15 22:18	
Dibromofluoromethane	107	86 - 112	05/28/15 22:18	
Toluene-d8	93	88 - 115	05/28/15 22:18	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:45
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0027-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/28/15 22:43	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/28/15 22:43	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/28/15 22:43	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/28/15 22:43	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/28/15 22:43	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/28/15 22:43	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/28/15 22:43	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/28/15 22:43	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/28/15 22:43	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/28/15 22:43	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/28/15 22:43	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/28/15 22:43	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/28/15 22:43	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/28/15 22:43	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/28/15 22:43	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/28/15 22:43	
2-Hexanone	2.2	U	25	2.2	1	05/28/15 22:43	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/28/15 22:43	
Acetone	**17**	**I**	50	5.6	1	05/28/15 22:43	
Benzene	0.21	U	1.0	0.21	1	05/28/15 22:43	
Bromochloromethane	0.27	U	5.0	0.27	1	05/28/15 22:43	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/28/15 22:43	
Bromoform	0.42	U	2.0	0.42	1	05/28/15 22:43	
Bromomethane	0.23	U	5.0	0.23	1	05/28/15 22:43	
Carbon Disulfide	2.4	U	10	2.4	1	05/28/15 22:43	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/28/15 22:43	
Chlorobenzene	0.16	U	1.0	0.16	1	05/28/15 22:43	
Chloroethane	0.52	U	5.0	0.52	1	05/28/15 22:43	
Chloroform	0.35	U	1.0	0.35	1	05/28/15 22:43	
Chloromethane	0.36	U	1.0	0.36	1	05/28/15 22:43	
cis-1,2-Dichloroethene	**0.67**	**I**	1.0	0.36	1	05/28/15 22:43	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/28/15 22:43	
Cyclohexane	0.24	U	10	0.24	1	05/28/15 22:43	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/28/15 22:43	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/28/15 22:43	
Ethylbenzene	0.21	U	1.0	0.21	1	05/28/15 22:43	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/28/15 22:43	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/28/15 22:43	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:45
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0027-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 22:43	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 22:43	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 22:43	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 22:43	
Styrene	0.29 U	1.0	0.29	1	05/28/15 22:43	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 22:43	
Toluene	0.19 U	1.0	0.19	1	05/28/15 22:43	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 22:43	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 22:43	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 22:43	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 22:43	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 22:43	
Vinyl Chloride	**1.7**	1.0	0.36	1	05/28/15 22:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	05/28/15 22:43	
4-Bromofluorobenzene	97	86 - 113	05/28/15 22:43	
Dibromofluoromethane	103	86 - 112	05/28/15 22:43	
Toluene-d8	95	88 - 115	05/28/15 22:43	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 10:53
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0028-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 23:07	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 23:07	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 23:07	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 23:07	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 23:07	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 23:07	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 23:07	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 23:07	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 23:07	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 23:07	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 23:07	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 23:07	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 23:07	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 23:07	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 23:07	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 23:07	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 23:07	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 23:07	
Acetone	5.6 U	50	5.6	1	05/28/15 23:07	
Benzene	0.21 U	1.0	0.21	1	05/28/15 23:07	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 23:07	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 23:07	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 23:07	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 23:07	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 23:07	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 23:07	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 23:07	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 23:07	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 23:07	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 23:07	
cis-1,2-Dichloroethene	**2.3**	1.0	0.36	1	05/28/15 23:07	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 23:07	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 23:07	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 23:07	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 23:07	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 23:07	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 23:07	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 23:07	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 10:53
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0028-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 23:07	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 23:07	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 23:07	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 23:07	
Styrene	0.29 U	1.0	0.29	1	05/28/15 23:07	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 23:07	
Toluene	0.19 U	1.0	0.19	1	05/28/15 23:07	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 23:07	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 23:07	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 23:07	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 23:07	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 23:07	
Vinyl Chloride	**83**	1.0	0.36	1	05/28/15 23:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/28/15 23:07	
4-Bromofluorobenzene	95	86 - 113	05/28/15 23:07	
Dibromofluoromethane	105	86 - 112	05/28/15 23:07	
Toluene-d8	94	88 - 115	05/28/15 23:07	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 13:34
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0029-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/28/15 23:32	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/28/15 23:32	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/28/15 23:32	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/28/15 23:32	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/28/15 23:32	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/28/15 23:32	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/28/15 23:32	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/28/15 23:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/28/15 23:32	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/28/15 23:32	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/28/15 23:32	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/28/15 23:32	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/28/15 23:32	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/28/15 23:32	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/28/15 23:32	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/28/15 23:32	
2-Hexanone	2.2	U	25	2.2	1	05/28/15 23:32	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/28/15 23:32	
Acetone	**7.0**	**I**	50	5.6	1	05/28/15 23:32	
Benzene	0.21	U	1.0	0.21	1	05/28/15 23:32	
Bromochloromethane	0.27	U	5.0	0.27	1	05/28/15 23:32	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/28/15 23:32	
Bromoform	0.42	U	2.0	0.42	1	05/28/15 23:32	
Bromomethane	0.23	U	5.0	0.23	1	05/28/15 23:32	
Carbon Disulfide	2.4	U	10	2.4	1	05/28/15 23:32	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/28/15 23:32	
Chlorobenzene	0.16	U	1.0	0.16	1	05/28/15 23:32	
Chloroethane	0.52	U	5.0	0.52	1	05/28/15 23:32	
Chloroform	0.35	U	1.0	0.35	1	05/28/15 23:32	
Chloromethane	0.36	U	1.0	0.36	1	05/28/15 23:32	
cis-1,2-Dichloroethene	**1.9**		1.0	0.36	1	05/28/15 23:32	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/28/15 23:32	
Cyclohexane	0.24	U	10	0.24	1	05/28/15 23:32	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/28/15 23:32	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/28/15 23:32	
Ethylbenzene	0.21	U	1.0	0.21	1	05/28/15 23:32	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/28/15 23:32	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/28/15 23:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 13:34
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0029-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 23:32	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 23:32	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 23:32	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 23:32	
Styrene	0.29 U	1.0	0.29	1	05/28/15 23:32	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 23:32	
Toluene	0.19 U	1.0	0.19	1	05/28/15 23:32	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 23:32	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 23:32	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 23:32	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 23:32	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 23:32	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 23:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/28/15 23:32	
4-Bromofluorobenzene	97	86 - 113	05/28/15 23:32	
Dibromofluoromethane	106	86 - 112	05/28/15 23:32	
Toluene-d8	96	88 - 115	05/28/15 23:32	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 12:21
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0030-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 23:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 23:57	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 23:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 23:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 23:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 23:57	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 23:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 23:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 23:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 23:57	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 23:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 23:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 23:57	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 23:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 23:57	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 23:57	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 23:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 23:57	
Acetone	5.6 U	50	5.6	1	05/28/15 23:57	
Benzene	0.21 U	1.0	0.21	1	05/28/15 23:57	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 23:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 23:57	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 23:57	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 23:57	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 23:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 23:57	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 23:57	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 23:57	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 23:57	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 23:57	
cis-1,2-Dichloroethene	**17**	1.0	0.36	1	05/28/15 23:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 23:57	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 23:57	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 23:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 23:57	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 23:57	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 23:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 23:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 12:21
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0030-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 23:57	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 23:57	
Methylene Chloride	0.21 U	5.0	0.21	1	05/28/15 23:57	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 23:57	
Styrene	0.29 U	1.0	0.29	1	05/28/15 23:57	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 23:57	
Toluene	0.19 U	1.0	0.19	1	05/28/15 23:57	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 23:57	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 23:57	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 23:57	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 23:57	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 23:57	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 23:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	114	72 - 121	05/28/15 23:57	
4-Bromofluorobenzene	94	86 - 113	05/28/15 23:57	
Dibromofluoromethane	107	86 - 112	05/28/15 23:57	
Toluene-d8	95	88 - 115	05/28/15 23:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:40
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0032-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 00:21	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 00:21	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 00:21	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 00:21	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 00:21	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 00:21	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 00:21	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 00:21	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 00:21	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 00:21	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 00:21	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 00:21	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 00:21	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 00:21	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 00:21	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 00:21	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 00:21	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 00:21	
Acetone	5.6 U	50	5.6	1	05/29/15 00:21	
Benzene	0.21 U	1.0	0.21	1	05/29/15 00:21	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 00:21	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 00:21	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 00:21	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 00:21	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 00:21	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 00:21	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 00:21	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 00:21	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 00:21	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 00:21	
cis-1,2-Dichloroethene	**120**	1.0	0.36	1	05/29/15 00:21	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 00:21	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 00:21	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 00:21	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 00:21	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 00:21	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 00:21	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 00:21	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:40
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0032-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 00:21	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 00:21	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 00:21	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 00:21	
Styrene	0.29	U	1.0	0.29	1	05/29/15 00:21	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 00:21	
Toluene	0.19	U	1.0	0.19	1	05/29/15 00:21	
trans-1,2-Dichloroethene	**0.60**	**I**	1.0	0.19	1	05/29/15 00:21	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 00:21	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/29/15 00:21	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 00:21	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 00:21	
Vinyl Chloride	**11**		1.0	0.36	1	05/29/15 00:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/29/15 00:21	
4-Bromofluorobenzene	95	86 - 113	05/29/15 00:21	
Dibromofluoromethane	106	86 - 112	05/29/15 00:21	
Toluene-d8	95	88 - 115	05/29/15 00:21	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:13
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0033-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 00:46	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 00:46	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 00:46	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 00:46	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 00:46	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 00:46	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 00:46	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 00:46	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 00:46	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 00:46	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 00:46	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 00:46	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 00:46	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 00:46	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 00:46	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 00:46	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 00:46	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 00:46	
Acetone	**7.0**	**I**	50	5.6	1	05/29/15 00:46	
Benzene	0.21	U	1.0	0.21	1	05/29/15 00:46	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 00:46	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 00:46	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 00:46	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 00:46	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 00:46	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 00:46	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 00:46	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 00:46	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 00:46	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 00:46	
cis-1,2-Dichloroethene	**32**		1.0	0.36	1	05/29/15 00:46	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 00:46	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 00:46	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 00:46	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 00:46	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 00:46	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 00:46	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 00:46	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 12:13
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0033-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 00:46	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 00:46	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 00:46	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 00:46	
Styrene	0.29	U	1.0	0.29	1	05/29/15 00:46	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 00:46	
Toluene	0.19	U	1.0	0.19	1	05/29/15 00:46	
trans-1,2-Dichloroethene	**0.74**	**I**	1.0	0.19	1	05/29/15 00:46	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 00:46	
Trichloroethene (TCE)	**0.36**	**I**	1.0	0.36	1	05/29/15 00:46	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 00:46	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 00:46	
Vinyl Chloride	**1.2**		1.0	0.36	1	05/29/15 00:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	05/29/15 00:46	
4-Bromofluorobenzene	96	86 - 113	05/29/15 00:46	
Dibromofluoromethane	108	86 - 112	05/29/15 00:46	
Toluene-d8	97	88 - 115	05/29/15 00:46	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:18
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0035-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 05:39	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 05:39	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 05:39	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 05:39	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 05:39	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 05:39	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 05:39	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 05:39	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 05:39	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 05:39	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 05:39	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 05:39	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 05:39	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 05:39	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 05:39	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 05:39	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 05:39	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 05:39	
Acetone	**6.0 I**	50	5.6	1	05/29/15 05:39	
Benzene	0.21 U	1.0	0.21	1	05/29/15 05:39	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 05:39	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 05:39	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 05:39	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 05:39	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 05:39	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 05:39	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 05:39	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 05:39	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 05:39	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 05:39	
cis-1,2-Dichloroethene	**66**	1.0	0.36	1	05/29/15 05:39	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 05:39	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 05:39	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 05:39	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 05:39	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 05:39	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 05:39	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 05:39	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:18
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0035-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 05:39	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 05:39	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 05:39	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 05:39	
Styrene	0.29 U	1.0	0.29	1	05/29/15 05:39	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 05:39	
Toluene	0.19 U	1.0	0.19	1	05/29/15 05:39	
trans-1,2-Dichloroethene	**1.8**	1.0	0.19	1	05/29/15 05:39	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 05:39	
Trichloroethene (TCE)	**3.4**	1.0	0.36	1	05/29/15 05:39	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 05:39	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 05:39	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 05:39	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/29/15 05:39	
4-Bromofluorobenzene	98	86 - 113	05/29/15 05:39	
Dibromofluoromethane	105	86 - 112	05/29/15 05:39	
Toluene-d8	93	88 - 115	05/29/15 05:39	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 09:47
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0039-032.5-20150520	**Units:**	ug/L
Lab Code:	J1504166-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 06:05	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 06:05	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 06:05	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 06:05	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 06:05	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 06:05	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 06:05	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 06:05	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 06:05	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 06:05	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 06:05	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 06:05	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 06:05	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 06:05	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 06:05	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 06:05	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 06:05	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 06:05	
Acetone	**6.0**	**I**	50	5.6	1	05/29/15 06:05	
Benzene	0.21	U	1.0	0.21	1	05/29/15 06:05	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 06:05	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 06:05	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 06:05	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 06:05	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 06:05	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 06:05	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 06:05	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 06:05	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 06:05	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 06:05	
cis-1,2-Dichloroethene	**6.5**		1.0	0.36	1	05/29/15 06:05	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 06:05	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 06:05	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 06:05	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 06:05	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 06:05	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 06:05	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 06:05	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 09:47
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0039-032.5-20150520	**Units:**	ug/L
Lab Code:	J1504166-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 06:05	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 06:05	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 06:05	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 06:05	
Styrene	0.29 U	1.0	0.29	1	05/29/15 06:05	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 06:05	
Toluene	0.19 U	1.0	0.19	1	05/29/15 06:05	
trans-1,2-Dichloroethene	**1.1**	1.0	0.19	1	05/29/15 06:05	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 06:05	
Trichloroethene (TCE)	**6.1**	1.0	0.36	1	05/29/15 06:05	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 06:05	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 06:05	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 06:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/29/15 06:05	
4-Bromofluorobenzene	95	86 - 113	05/29/15 06:05	
Dibromofluoromethane	105	86 - 112	05/29/15 06:05	
Toluene-d8	92	88 - 115	05/29/15 06:05	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:44
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0041-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 06:29	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 06:29	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 06:29	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 06:29	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 06:29	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 06:29	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 06:29	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 06:29	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 06:29	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 06:29	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 06:29	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 06:29	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 06:29	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 06:29	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 06:29	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 06:29	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 06:29	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 06:29	
Acetone	**5.8**	**I**	50	5.6	1	05/29/15 06:29	
Benzene	0.21	U	1.0	0.21	1	05/29/15 06:29	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 06:29	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 06:29	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 06:29	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 06:29	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 06:29	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 06:29	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 06:29	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 06:29	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 06:29	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 06:29	
cis-1,2-Dichloroethene	**6.1**		1.0	0.36	1	05/29/15 06:29	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 06:29	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 06:29	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 06:29	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 06:29	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 06:29	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 06:29	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 06:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 13:44
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0041-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 06:29	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 06:29	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 06:29	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 06:29	
Styrene	0.29	U	1.0	0.29	1	05/29/15 06:29	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 06:29	
Toluene	0.19	U	1.0	0.19	1	05/29/15 06:29	
trans-1,2-Dichloroethene	**0.39**	**I**	1.0	0.19	1	05/29/15 06:29	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 06:29	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/29/15 06:29	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 06:29	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 06:29	
Vinyl Chloride	0.36	U	1.0	0.36	1	05/29/15 06:29	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	05/29/15 06:29	
4-Bromofluorobenzene	96	86 - 113	05/29/15 06:29	
Dibromofluoromethane	105	86 - 112	05/29/15 06:29	
Toluene-d8	96	88 - 115	05/29/15 06:29	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 14:19
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0042-035.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 06:54	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 06:54	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 06:54	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 06:54	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 06:54	
1,1-Dichloroethene (1,1-DCE)	**0.20 I**	1.0	0.16	1	05/29/15 06:54	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 06:54	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 06:54	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 06:54	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 06:54	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 06:54	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 06:54	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 06:54	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 06:54	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 06:54	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 06:54	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 06:54	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 06:54	
Acetone	5.6 U	50	5.6	1	05/29/15 06:54	
Benzene	0.21 U	1.0	0.21	1	05/29/15 06:54	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 06:54	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 06:54	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 06:54	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 06:54	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 06:54	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 06:54	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 06:54	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 06:54	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 06:54	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 06:54	
cis-1,2-Dichloroethene	**49**	1.0	0.36	1	05/29/15 06:54	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 06:54	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 06:54	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 06:54	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 06:54	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 06:54	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 06:54	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 06:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 14:19
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0042-035.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 06:54	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 06:54	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 06:54	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 06:54	
Styrene	0.29 U	1.0	0.29	1	05/29/15 06:54	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 06:54	
Toluene	0.19 U	1.0	0.19	1	05/29/15 06:54	
trans-1,2-Dichloroethene	**2.4**	1.0	0.19	1	05/29/15 06:54	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 06:54	
Trichloroethene (TCE)	**9.0**	1.0	0.36	1	05/29/15 06:54	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 06:54	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 06:54	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 06:54	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/29/15 06:54	
4-Bromofluorobenzene	97	86 - 113	05/29/15 06:54	
Dibromofluoromethane	106	86 - 112	05/29/15 06:54	
Toluene-d8	96	88 - 115	05/29/15 06:54	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:06
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0044-027.5-20150520	**Units:**	ug/L
Lab Code:	J1504166-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 07:19	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 07:19	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 07:19	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 07:19	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 07:19	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 07:19	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 07:19	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 07:19	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 07:19	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 07:19	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 07:19	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 07:19	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 07:19	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 07:19	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 07:19	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 07:19	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 07:19	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 07:19	
Acetone	5.6 U	50	5.6	1	05/29/15 07:19	
Benzene	0.21 U	1.0	0.21	1	05/29/15 07:19	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 07:19	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 07:19	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 07:19	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 07:19	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 07:19	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 07:19	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 07:19	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 07:19	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 07:19	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 07:19	
cis-1,2-Dichloroethene	**1.4**	1.0	0.36	1	05/29/15 07:19	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 07:19	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 07:19	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 07:19	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 07:19	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 07:19	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 07:19	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 07:19	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 11:06
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0044-027.5-20150520	**Units:**	ug/L
Lab Code:	J1504166-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 07:19	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 07:19	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 07:19	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 07:19	
Styrene	0.29	U	1.0	0.29	1	05/29/15 07:19	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 07:19	
Toluene	0.19	U	1.0	0.19	1	05/29/15 07:19	
trans-1,2-Dichloroethene	**0.31**	**I**	1.0	0.19	1	05/29/15 07:19	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 07:19	
Trichloroethene (TCE)	**1.1**		1.0	0.36	1	05/29/15 07:19	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 07:19	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 07:19	
Vinyl Chloride	0.36	U	1.0	0.36	1	05/29/15 07:19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	112	72 - 121	05/29/15 07:19	
4-Bromofluorobenzene	96	86 - 113	05/29/15 07:19	
Dibromofluoromethane	106	86 - 112	05/29/15 07:19	
Toluene-d8	96	88 - 115	05/29/15 07:19	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:07
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0045-034.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 07:44	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 07:44	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 07:44	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 07:44	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 07:44	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 07:44	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 07:44	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 07:44	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 07:44	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 07:44	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 07:44	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 07:44	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 07:44	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 07:44	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 07:44	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 07:44	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 07:44	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 07:44	
Acetone	5.6 U	50	5.6	1	05/29/15 07:44	
Benzene	0.21 U	1.0	0.21	1	05/29/15 07:44	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 07:44	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 07:44	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 07:44	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 07:44	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 07:44	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 07:44	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 07:44	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 07:44	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 07:44	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 07:44	
cis-1,2-Dichloroethene	**36**	1.0	0.36	1	05/29/15 07:44	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 07:44	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 07:44	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 07:44	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 07:44	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 07:44	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 07:44	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 07:44	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:07
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0045-034.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 07:44	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 07:44	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 07:44	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 07:44	
Styrene	0.29 U	1.0	0.29	1	05/29/15 07:44	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 07:44	
Toluene	0.19 U	1.0	0.19	1	05/29/15 07:44	
trans-1,2-Dichloroethene	**1.8**	1.0	0.19	1	05/29/15 07:44	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 07:44	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 07:44	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 07:44	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 07:44	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 07:44	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	114	72 - 121	05/29/15 07:44	
4-Bromofluorobenzene	97	86 - 113	05/29/15 07:44	
Dibromofluoromethane	109	86 - 112	05/29/15 07:44	
Toluene-d8	95	88 - 115	05/29/15 07:44	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:51
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0048-027.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 08:08	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 08:08	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 08:08	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 08:08	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 08:08	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 08:08	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 08:08	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 08:08	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 08:08	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 08:08	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 08:08	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 08:08	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 08:08	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 08:08	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 08:08	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 08:08	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 08:08	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 08:08	
Acetone	**8.3**	**I**	50	5.6	1	05/29/15 08:08	
Benzene	0.21	U	1.0	0.21	1	05/29/15 08:08	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 08:08	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 08:08	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 08:08	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 08:08	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 08:08	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 08:08	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 08:08	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 08:08	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 08:08	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 08:08	
cis-1,2-Dichloroethene	**55**		1.0	0.36	1	05/29/15 08:08	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 08:08	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 08:08	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 08:08	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 08:08	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 08:08	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 08:08	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 08:08	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:51
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0048-027.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 08:08	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 08:08	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 08:08	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 08:08	
Styrene	0.29	U	1.0	0.29	1	05/29/15 08:08	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 08:08	
Toluene	0.19	U	1.0	0.19	1	05/29/15 08:08	
trans-1,2-Dichloroethene	**1.8**		1.0	0.19	1	05/29/15 08:08	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 08:08	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/29/15 08:08	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 08:08	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 08:08	
Vinyl Chloride	**0.45**	**I**	1.0	0.36	1	05/29/15 08:08	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	117	72 - 121	05/29/15 08:08	
4-Bromofluorobenzene	95	86 - 113	05/29/15 08:08	
Dibromofluoromethane	109	86 - 112	05/29/15 08:08	
Toluene-d8	96	88 - 115	05/29/15 08:08	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 14:29
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0049-027.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 08:33	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 08:33	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 08:33	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 08:33	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 08:33	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 08:33	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 08:33	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 08:33	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 08:33	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 08:33	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 08:33	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 08:33	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 08:33	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 08:33	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 08:33	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 08:33	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 08:33	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 08:33	
Acetone	5.6 U	50	5.6	1	05/29/15 08:33	
Benzene	0.21 U	1.0	0.21	1	05/29/15 08:33	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 08:33	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 08:33	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 08:33	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 08:33	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 08:33	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 08:33	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 08:33	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 08:33	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 08:33	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 08:33	
cis-1,2-Dichloroethene	**79**	1.0	0.36	1	05/29/15 08:33	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 08:33	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 08:33	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 08:33	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 08:33	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 08:33	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 08:33	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 08:33	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 14:29
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0049-027.5-20150519	**Units:**	ug/L
Lab Code:	J1504166-028	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 08:33	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 08:33	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 08:33	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 08:33	
Styrene	0.29 U	1.0	0.29	1	05/29/15 08:33	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 08:33	
Toluene	0.19 U	1.0	0.19	1	05/29/15 08:33	
trans-1,2-Dichloroethene	**1.6**	1.0	0.19	1	05/29/15 08:33	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 08:33	
Trichloroethene (TCE)	**0.61 I**	1.0	0.36	1	05/29/15 08:33	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 08:33	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 08:33	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 08:33	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	116	72 - 121	05/29/15 08:33	
4-Bromofluorobenzene	96	86 - 113	05/29/15 08:33	
Dibromofluoromethane	109	86 - 112	05/29/15 08:33	
Toluene-d8	95	88 - 115	05/29/15 08:33	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 11:37
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0051-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 08:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 08:57	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 08:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 08:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 08:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 08:57	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 08:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 08:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 08:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 08:57	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 08:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 08:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 08:57	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 08:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 08:57	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 08:57	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 08:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 08:57	
Acetone	5.6 U	50	5.6	1	05/29/15 08:57	
Benzene	0.21 U	1.0	0.21	1	05/29/15 08:57	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 08:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 08:57	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 08:57	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 08:57	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 08:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 08:57	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 08:57	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 08:57	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 08:57	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 08:57	
cis-1,2-Dichloroethene	**6.0**	1.0	0.36	1	05/29/15 08:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 08:57	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 08:57	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 08:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 08:57	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 08:57	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 08:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 08:57	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 11:37
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0051-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-029	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 08:57	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 08:57	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 08:57	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 08:57	
Styrene	0.29	U	1.0	0.29	1	05/29/15 08:57	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 08:57	
Toluene	0.19	U	1.0	0.19	1	05/29/15 08:57	
trans-1,2-Dichloroethene	**0.56**	**I**	1.0	0.19	1	05/29/15 08:57	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 08:57	
Trichloroethene (TCE)	**0.70**	**I**	1.0	0.36	1	05/29/15 08:57	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 08:57	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 08:57	
Vinyl Chloride	**5.6**		1.0	0.36	1	05/29/15 08:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	115	72 - 121	05/29/15 08:57	
4-Bromofluorobenzene	96	86 - 113	05/29/15 08:57	
Dibromofluoromethane	108	86 - 112	05/29/15 08:57	
Toluene-d8	95	88 - 115	05/29/15 08:57	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:28
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0052-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-030	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 12:19	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 12:19	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 12:19	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 12:19	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 12:19	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 12:19	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 12:19	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 12:19	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 12:19	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 12:19	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 12:19	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 12:19	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 12:19	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 12:19	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 12:19	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 12:19	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 12:19	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 12:19	
Acetone	5.6 U	50	5.6	1	05/29/15 12:19	
Benzene	0.21 U	1.0	0.21	1	05/29/15 12:19	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 12:19	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 12:19	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 12:19	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 12:19	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 12:19	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 12:19	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 12:19	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 12:19	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 12:19	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 12:19	
cis-1,2-Dichloroethene	**19**	1.0	0.36	1	05/29/15 12:19	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 12:19	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 12:19	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 12:19	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 12:19	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 12:19	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 12:19	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 12:19	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:28
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0052-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-030	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84	U	10	0.84	1	05/29/15 12:19	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	05/29/15 12:19	
Methylene Chloride	0.21	U	5.0	0.21	1	05/29/15 12:19	
o-Xylene	0.14	U	1.0	0.14	1	05/29/15 12:19	
Styrene	0.29	U	1.0	0.29	1	05/29/15 12:19	
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	05/29/15 12:19	
Toluene	0.19	U	1.0	0.19	1	05/29/15 12:19	
trans-1,2-Dichloroethene	**0.51**	**I**	1.0	0.19	1	05/29/15 12:19	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	05/29/15 12:19	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	05/29/15 12:19	
Trichlorofluoromethane	0.24	U	20	0.24	1	05/29/15 12:19	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	05/29/15 12:19	
Vinyl Chloride	**1.5**		1.0	0.36	1	05/29/15 12:19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	113	72 - 121	05/29/15 12:19	
4-Bromofluorobenzene	96	86 - 113	05/29/15 12:19	
Dibromofluoromethane	107	86 - 112	05/29/15 12:19	
Toluene-d8	95	88 - 115	05/29/15 12:19	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:59
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0053-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-031	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 09:47	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 09:47	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 09:47	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 09:47	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 09:47	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 09:47	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 09:47	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 09:47	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 09:47	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 09:47	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 09:47	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 09:47	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 09:47	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 09:47	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 09:47	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 09:47	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 09:47	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 09:47	
Acetone	5.6 U	50	5.6	1	05/29/15 09:47	
Benzene	0.21 U	1.0	0.21	1	05/29/15 09:47	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 09:47	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 09:47	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 09:47	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 09:47	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 09:47	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 09:47	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 09:47	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 09:47	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 09:47	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 09:47	
cis-1,2-Dichloroethene	**6.3**	1.0	0.36	1	05/29/15 09:47	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 09:47	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 09:47	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 09:47	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 09:47	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 09:47	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 09:47	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 09:47	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:59
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0053-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-031	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 09:47	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 09:47	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 09:47	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 09:47	
Styrene	0.29 U	1.0	0.29	1	05/29/15 09:47	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 09:47	
Toluene	0.19 U	1.0	0.19	1	05/29/15 09:47	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 09:47	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 09:47	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 09:47	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 09:47	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 09:47	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 09:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	111	72 - 121	05/29/15 09:47	
4-Bromofluorobenzene	96	86 - 113	05/29/15 09:47	
Dibromofluoromethane	105	86 - 112	05/29/15 09:47	
Toluene-d8	93	88 - 115	05/29/15 09:47	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 09:49
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0055-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-032	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 10:12	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 10:12	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 10:12	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 10:12	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 10:12	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 10:12	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 10:12	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 10:12	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 10:12	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 10:12	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 10:12	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 10:12	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 10:12	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 10:12	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 10:12	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 10:12	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 10:12	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 10:12	
Acetone	5.6 U	50	5.6	1	05/29/15 10:12	
Benzene	0.21 U	1.0	0.21	1	05/29/15 10:12	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 10:12	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 10:12	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 10:12	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 10:12	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 10:12	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 10:12	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 10:12	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 10:12	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 10:12	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 10:12	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/29/15 10:12	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 10:12	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 10:12	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 10:12	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 10:12	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 10:12	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 10:12	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 10:12	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 09:49
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0055-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-032	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 10:12	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 10:12	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 10:12	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 10:12	
Styrene	0.29 U	1.0	0.29	1	05/29/15 10:12	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 10:12	
Toluene	0.19 U	1.0	0.19	1	05/29/15 10:12	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 10:12	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 10:12	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 10:12	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 10:12	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 10:12	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 10:12	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	114	72 - 121	05/29/15 10:12	
4-Bromofluorobenzene	97	86 - 113	05/29/15 10:12	
Dibromofluoromethane	107	86 - 112	05/29/15 10:12	
Toluene-d8	95	88 - 115	05/29/15 10:12	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 09:44
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0056-010.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-033	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 10:36	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 10:36	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 10:36	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 10:36	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 10:36	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 10:36	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 10:36	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 10:36	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 10:36	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 10:36	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 10:36	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 10:36	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 10:36	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 10:36	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 10:36	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 10:36	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 10:36	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 10:36	
Acetone	**16**	**I**	50	5.6	1	05/29/15 10:36	
Benzene	0.21	U	1.0	0.21	1	05/29/15 10:36	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 10:36	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 10:36	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 10:36	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 10:36	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 10:36	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 10:36	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 10:36	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 10:36	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 10:36	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 10:36	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	05/29/15 10:36	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 10:36	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 10:36	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 10:36	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 10:36	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 10:36	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 10:36	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 10:36	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 09:44
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0056-010.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-033	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 10:36	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 10:36	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 10:36	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 10:36	
Styrene	0.29 U	1.0	0.29	1	05/29/15 10:36	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 10:36	
Toluene	0.19 U	1.0	0.19	1	05/29/15 10:36	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 10:36	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 10:36	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 10:36	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 10:36	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 10:36	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 10:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/29/15 10:36	
4-Bromofluorobenzene	95	86 - 113	05/29/15 10:36	
Dibromofluoromethane	106	86 - 112	05/29/15 10:36	
Toluene-d8	95	88 - 115	05/29/15 10:36	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:16
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0057-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-034	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 11:01	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 11:01	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 11:01	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 11:01	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 11:01	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 11:01	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 11:01	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 11:01	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 11:01	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 11:01	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 11:01	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 11:01	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 11:01	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 11:01	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 11:01	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 11:01	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 11:01	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 11:01	
Acetone	5.6 U	50	5.6	1	05/29/15 11:01	
Benzene	0.21 U	1.0	0.21	1	05/29/15 11:01	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 11:01	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 11:01	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 11:01	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 11:01	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 11:01	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 11:01	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 11:01	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 11:01	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 11:01	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 11:01	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/29/15 11:01	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 11:01	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 11:01	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 11:01	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 11:01	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 11:01	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 11:01	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 11:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 10:16
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0057-025.0-20150520	**Units:**	ug/L
Lab Code:	J1504166-034	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 11:01	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 11:01	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 11:01	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 11:01	
Styrene	0.29 U	1.0	0.29	1	05/29/15 11:01	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 11:01	
Toluene	0.19 U	1.0	0.19	1	05/29/15 11:01	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 11:01	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 11:01	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 11:01	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 11:01	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 11:01	
Vinyl Chloride	**65**	1.0	0.36	1	05/29/15 11:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/29/15 11:01	
4-Bromofluorobenzene	96	86 - 113	05/29/15 11:01	
Dibromofluoromethane	105	86 - 112	05/29/15 11:01	
Toluene-d8	94	88 - 115	05/29/15 11:01	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:17
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0058-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-035	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 11:26	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 11:26	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 11:26	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 11:26	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 11:26	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 11:26	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 11:26	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 11:26	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 11:26	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 11:26	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 11:26	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 11:26	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 11:26	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 11:26	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 11:26	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 11:26	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 11:26	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 11:26	
Acetone	5.6	U	50	5.6	1	05/29/15 11:26	
Benzene	0.21	U	1.0	0.21	1	05/29/15 11:26	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 11:26	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 11:26	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 11:26	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 11:26	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 11:26	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 11:26	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 11:26	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 11:26	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 11:26	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 11:26	
cis-1,2-Dichloroethene	**0.80**	**I**	1.0	0.36	1	05/29/15 11:26	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 11:26	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 11:26	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 11:26	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 11:26	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 11:26	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 11:26	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 11:26	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 16:17
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0058-010.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-035	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 11:26	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 11:26	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 11:26	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 11:26	
Styrene	0.29 U	1.0	0.29	1	05/29/15 11:26	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 11:26	
Toluene	0.19 U	1.0	0.19	1	05/29/15 11:26	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 11:26	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 11:26	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 11:26	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 11:26	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 11:26	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 11:26	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	114	72 - 121	05/29/15 11:26	
4-Bromofluorobenzene	95	86 - 113	05/29/15 11:26	
Dibromofluoromethane	107	86 - 112	05/29/15 11:26	
Toluene-d8	94	88 - 115	05/29/15 11:26	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:43
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0059-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-036	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 11:51	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 11:51	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 11:51	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 11:51	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 11:51	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 11:51	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 11:51	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 11:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 11:51	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 11:51	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 11:51	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 11:51	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 11:51	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 11:51	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 11:51	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 11:51	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 11:51	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 11:51	
Acetone	5.6 U	50	5.6	1	05/29/15 11:51	
Benzene	0.21 U	1.0	0.21	1	05/29/15 11:51	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 11:51	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 11:51	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 11:51	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 11:51	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 11:51	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 11:51	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 11:51	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 11:51	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 11:51	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 11:51	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/29/15 11:51	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 11:51	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 11:51	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 11:51	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 11:51	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 11:51	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 11:51	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 11:51	

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 15:43
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0059-025.0-20150519	**Units:**	ug/L
Lab Code:	J1504166-036	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 11:51	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 11:51	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 11:51	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 11:51	
Styrene	0.29 U	1.0	0.29	1	05/29/15 11:51	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 11:51	
Toluene	0.19 U	1.0	0.19	1	05/29/15 11:51	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 11:51	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 11:51	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 11:51	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 11:51	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 11:51	
Vinyl Chloride	**22**	1.0	0.36	1	05/29/15 11:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	113	72 - 121	05/29/15 11:51	
4-Bromofluorobenzene	95	86 - 113	05/29/15 11:51	
Dibromofluoromethane	106	86 - 112	05/29/15 11:51	
Toluene-d8	95	88 - 115	05/29/15 11:51	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 00:00
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1504166-037	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 05:15	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 05:15	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 05:15	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 05:15	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 05:15	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 05:15	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 05:15	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 05:15	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 05:15	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 05:15	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 05:15	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 05:15	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 05:15	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 05:15	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 05:15	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 05:15	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 05:15	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 05:15	
Acetone	**6.0**	**I**	50	5.6	1	05/29/15 05:15	
Benzene	0.21	U	1.0	0.21	1	05/29/15 05:15	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 05:15	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 05:15	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 05:15	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 05:15	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 05:15	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 05:15	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 05:15	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 05:15	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 05:15	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 05:15	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	05/29/15 05:15	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 05:15	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 05:15	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 05:15	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 05:15	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 05:15	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 05:15	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 05:15	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/19/15 00:00
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1504166-037	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 05:15	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 05:15	
Methylene Chloride	**0.63 IV**	5.0	0.21	1	05/29/15 05:15	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 05:15	
Styrene	0.29 U	1.0	0.29	1	05/29/15 05:15	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 05:15	
Toluene	0.19 U	1.0	0.19	1	05/29/15 05:15	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 05:15	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 05:15	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 05:15	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 05:15	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 05:15	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 05:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	05/29/15 05:15	
4-Bromofluorobenzene	95	86 - 113	05/29/15 05:15	
Dibromofluoromethane	106	86 - 112	05/29/15 05:15	
Toluene-d8	93	88 - 115	05/29/15 05:15	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 10:22
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0040-022.5-20120520	**Units:**	ug/L
Lab Code:	J1504166-038	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	05/29/15 09:22	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	05/29/15 09:22	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	05/29/15 09:22	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	05/29/15 09:22	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	05/29/15 09:22	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	05/29/15 09:22	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	05/29/15 09:22	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	05/29/15 09:22	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	05/29/15 09:22	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	05/29/15 09:22	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	05/29/15 09:22	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	05/29/15 09:22	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	05/29/15 09:22	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	05/29/15 09:22	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	05/29/15 09:22	
2-Butanone (MEK)	3.8	U	10	3.8	1	05/29/15 09:22	
2-Hexanone	2.2	U	25	2.2	1	05/29/15 09:22	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	05/29/15 09:22	
Acetone	**7.8**	**I**	50	5.6	1	05/29/15 09:22	
Benzene	0.21	U	1.0	0.21	1	05/29/15 09:22	
Bromochloromethane	0.27	U	5.0	0.27	1	05/29/15 09:22	
Bromodichloromethane	0.22	U	1.0	0.22	1	05/29/15 09:22	
Bromoform	0.42	U	2.0	0.42	1	05/29/15 09:22	
Bromomethane	0.23	U	5.0	0.23	1	05/29/15 09:22	
Carbon Disulfide	2.4	U	10	2.4	1	05/29/15 09:22	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	05/29/15 09:22	
Chlorobenzene	0.16	U	1.0	0.16	1	05/29/15 09:22	
Chloroethane	0.52	U	5.0	0.52	1	05/29/15 09:22	
Chloroform	0.35	U	1.0	0.35	1	05/29/15 09:22	
Chloromethane	0.36	U	1.0	0.36	1	05/29/15 09:22	
cis-1,2-Dichloroethene	**1.5**		1.0	0.36	1	05/29/15 09:22	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	05/29/15 09:22	
Cyclohexane	0.24	U	10	0.24	1	05/29/15 09:22	
Dibromochloromethane	0.21	U	1.0	0.21	1	05/29/15 09:22	
Dichlorodifluoromethane	0.23	U	20	0.23	1	05/29/15 09:22	
Ethylbenzene	0.21	U	1.0	0.21	1	05/29/15 09:22	
Isopropylbenzene	0.14	U	1.0	0.14	1	05/29/15 09:22	
m,p-Xylenes	0.31	U	2.0	0.31	1	05/29/15 09:22	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	05/20/15 10:22
Sample Matrix:	Water	**Date Received:**	05/21/15 10:10
Sample Name:	M505-MW0040-022.5-20120520	**Units:**	ug/L
Lab Code:	J1504166-038	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 09:22	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 09:22	
Methylene Chloride	0.21 U	5.0	0.21	1	05/29/15 09:22	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 09:22	
Styrene	0.29 U	1.0	0.29	1	05/29/15 09:22	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 09:22	
Toluene	0.19 U	1.0	0.19	1	05/29/15 09:22	
trans-1,2-Dichloroethene	**0.31 I**	1.0	0.19	1	05/29/15 09:22	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 09:22	
Trichloroethene (TCE)	**1.9**	1.0	0.36	1	05/29/15 09:22	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 09:22	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 09:22	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 09:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	115	72 - 121	05/29/15 09:22	
4-Bromofluorobenzene	96	86 - 113	05/29/15 09:22	
Dibromofluoromethane	108	86 - 112	05/29/15 09:22	
Toluene-d8	94	88 - 115	05/29/15 09:22	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1503976-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/28/15 16:36	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/28/15 16:36	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/28/15 16:36	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/28/15 16:36	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/28/15 16:36	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/28/15 16:36	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/28/15 16:36	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/28/15 16:36	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/28/15 16:36	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/28/15 16:36	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/28/15 16:36	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/28/15 16:36	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/28/15 16:36	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/28/15 16:36	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/28/15 16:36	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/28/15 16:36	
2-Hexanone	2.2 U	25	2.2	1	05/28/15 16:36	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/28/15 16:36	
Acetone	5.6 U	50	5.6	1	05/28/15 16:36	
Benzene	0.21 U	1.0	0.21	1	05/28/15 16:36	
Bromochloromethane	0.27 U	5.0	0.27	1	05/28/15 16:36	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/28/15 16:36	
Bromoform	0.42 U	2.0	0.42	1	05/28/15 16:36	
Bromomethane	0.23 U	5.0	0.23	1	05/28/15 16:36	
Carbon Disulfide	2.4 U	10	2.4	1	05/28/15 16:36	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/28/15 16:36	
Chlorobenzene	0.16 U	1.0	0.16	1	05/28/15 16:36	
Chloroethane	0.52 U	5.0	0.52	1	05/28/15 16:36	
Chloroform	0.35 U	1.0	0.35	1	05/28/15 16:36	
Chloromethane	0.36 U	1.0	0.36	1	05/28/15 16:36	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/28/15 16:36	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/28/15 16:36	
Cyclohexane	0.24 U	10	0.24	1	05/28/15 16:36	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/28/15 16:36	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/28/15 16:36	
Ethylbenzene	0.21 U	1.0	0.21	1	05/28/15 16:36	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/28/15 16:36	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/28/15 16:36	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1503976-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/28/15 16:36	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/28/15 16:36	
Methylene Chloride	**0.21 I**	5.0	0.21	1	05/28/15 16:36	
o-Xylene	0.14 U	1.0	0.14	1	05/28/15 16:36	
Styrene	0.29 U	1.0	0.29	1	05/28/15 16:36	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/28/15 16:36	
Toluene	0.19 U	1.0	0.19	1	05/28/15 16:36	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/28/15 16:36	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/28/15 16:36	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/28/15 16:36	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/28/15 16:36	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/28/15 16:36	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/28/15 16:36	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	72 - 121	05/28/15 16:36	
4-Bromofluorobenzene	96	86 - 113	05/28/15 16:36	
Dibromofluoromethane	102	86 - 112	05/28/15 16:36	
Toluene-d8	97	88 - 115	05/28/15 16:36	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1503977-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	05/29/15 04:51	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	05/29/15 04:51	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	05/29/15 04:51	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	05/29/15 04:51	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	05/29/15 04:51	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	05/29/15 04:51	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	05/29/15 04:51	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	05/29/15 04:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	05/29/15 04:51	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	05/29/15 04:51	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	05/29/15 04:51	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	05/29/15 04:51	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	05/29/15 04:51	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	05/29/15 04:51	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	05/29/15 04:51	
2-Butanone (MEK)	3.8 U	10	3.8	1	05/29/15 04:51	
2-Hexanone	2.2 U	25	2.2	1	05/29/15 04:51	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	05/29/15 04:51	
Acetone	5.6 U	50	5.6	1	05/29/15 04:51	
Benzene	0.21 U	1.0	0.21	1	05/29/15 04:51	
Bromochloromethane	0.27 U	5.0	0.27	1	05/29/15 04:51	
Bromodichloromethane	0.22 U	1.0	0.22	1	05/29/15 04:51	
Bromoform	0.42 U	2.0	0.42	1	05/29/15 04:51	
Bromomethane	0.23 U	5.0	0.23	1	05/29/15 04:51	
Carbon Disulfide	2.4 U	10	2.4	1	05/29/15 04:51	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	05/29/15 04:51	
Chlorobenzene	0.16 U	1.0	0.16	1	05/29/15 04:51	
Chloroethane	0.52 U	5.0	0.52	1	05/29/15 04:51	
Chloroform	0.35 U	1.0	0.35	1	05/29/15 04:51	
Chloromethane	0.36 U	1.0	0.36	1	05/29/15 04:51	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	05/29/15 04:51	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	05/29/15 04:51	
Cyclohexane	0.24 U	10	0.24	1	05/29/15 04:51	
Dibromochloromethane	0.21 U	1.0	0.21	1	05/29/15 04:51	
Dichlorodifluoromethane	0.23 U	20	0.23	1	05/29/15 04:51	
Ethylbenzene	0.21 U	1.0	0.21	1	05/29/15 04:51	
Isopropylbenzene	0.14 U	1.0	0.14	1	05/29/15 04:51	
m,p-Xylenes	0.31 U	2.0	0.31	1	05/29/15 04:51	

Analytical Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1503977-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Methyl Acetate	0.84 U	10	0.84	1	05/29/15 04:51	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	05/29/15 04:51	
Methylene Chloride	**0.75 I**	5.0	0.21	1	05/29/15 04:51	
o-Xylene	0.14 U	1.0	0.14	1	05/29/15 04:51	
Styrene	0.29 U	1.0	0.29	1	05/29/15 04:51	
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	05/29/15 04:51	
Toluene	0.19 U	1.0	0.19	1	05/29/15 04:51	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	05/29/15 04:51	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	05/29/15 04:51	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	05/29/15 04:51	
Trichlorofluoromethane	0.24 U	20	0.24	1	05/29/15 04:51	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	05/29/15 04:51	
Vinyl Chloride	0.36 U	1.0	0.36	1	05/29/15 04:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	113	72 - 121	05/29/15 04:51	
4-Bromofluorobenzene	97	86 - 113	05/29/15 04:51	
Dibromofluoromethane	106	86 - 112	05/29/15 04:51	
Toluene-d8	94	88 - 115	05/29/15 04:51	

Client: Levine Fricke **Service Request:** J1504166
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-EB-20120520	J1504166-001	104	97	103
M505-MW003I-030.0-20150519	J1504166-002	104	95	103
M505-MW0004S-009.0-20150519	J1504166-003	108	96	104
M505-MW0005-030.0-20150520	J1504166-004	106	96	104
M505-MW0007I-030.0-20150519	J1504166-005	105	94	103
M505-MW0010IS-025.5-20150519	J1504166-006	108	95	101
M505-MW0013IS-025.5-20150519	J1504166-007	109	96	103
M505-MW0016-036.0-20150519	J1504166-008	110	95	105
M505-MW0018-039.0-20150519	J1504166-009	110	96	103
M505-MW0019-025.0-20150520	J1504166-010	110	99	106
M505-MW0020-036.0-20150520	J1504166-011	111	96	106
M505-MW0021-025.5-20150519	J1504166-012	109	96	103
M505-MW0023-025.0-20150519	J1504166-013	111	96	103
M505-MW0025-025.0-20150519	J1504166-014	112	98	107
M505-MW0027-025.0-20150520	J1504166-015	107	97	103
M505-MW0028-025.0-20150520	J1504166-016	112	95	105
M505-MW0029-025.0-20150520	J1504166-017	112	97	106
M505-MW0030-025.0-20150520	J1504166-018	114	94	107
M505-MW0032-025.0-20150519	J1504166-019	112	95	106
M505-MW0033-025.0-20150519	J1504166-020	111	96	108
M505-MW0035-025.0-20150519	J1504166-021	110	98	105
M505-MW0039-032.5-20150520	J1504166-022	110	95	105
M505-MW0041-025.0-20150519	J1504166-023	111	96	105
M505-MW0042-035.0-20150519	J1504166-024	112	97	106
M505-MW0044-027.5-20150520	J1504166-025	112	96	106
M505-MW0045-034.5-20150519	J1504166-026	114	97	109
M505-MW0048-027.5-20150519	J1504166-027	117	95	109
M505-MW0049-027.5-20150519	J1504166-028	116	96	109
M505-MW0051-025.0-20150519	J1504166-029	115	96	108
M505-MW0052-010.0-20150519	J1504166-030	113	96	107
M505-MW0053-010.0-20150519	J1504166-031	111	96	105
M505-MW0055-025.0-20150519	J1504166-032	114	97	107
M505-MW0056-010.0-20150520	J1504166-033	110	95	106
M505-MW0057-025.0-20150520	J1504166-034	110	96	105
M505-MW0058-010.0-20150519	J1504166-035	114	95	107

Client: Levine Fricke **Service Request:** J1504166
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-MW0059-025.0-20150519	J1504166-036	113	95	106
Trip Blank	J1504166-037	110	95	106
M505-MW0040-022.5-20120520	J1504166-038	115	96	108
Lab Control Sample	JQ1503976-01	94	98	98
Duplicate Lab Control Sample	JQ1503976-02	93	97	99
Method Blank	JQ1503976-03	103	96	102
Lab Control Sample	JQ1503977-01	101	98	102
Duplicate Lab Control Sample	JQ1503977-02	103	97	104
Method Blank	JQ1503977-03	113	97	106

Client: Levine Fricke **Service Request:** J1504166
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-EB-20120520	J1504166-001	97
M505-MW003I-030.0-20150519	J1504166-002	96
M505-MW0004S-009.0-20150519	J1504166-003	96
M505-MW0005-030.0-20150520	J1504166-004	95
M505-MW0007I-030.0-20150519	J1504166-005	98
M505-MW0010IS-025.5-20150519	J1504166-006	98
M505-MW0013IS-025.5-20150519	J1504166-007	95
M505-MW0016-036.0-20150519	J1504166-008	94
M505-MW0018-039.0-20150519	J1504166-009	95
M505-MW0019-025.0-20150520	J1504166-010	95
M505-MW0020-036.0-20150520	J1504166-011	96
M505-MW0021-025.5-20150519	J1504166-012	97
M505-MW0023-025.0-20150519	J1504166-013	94
M505-MW0025-025.0-20150519	J1504166-014	93
M505-MW0027-025.0-20150520	J1504166-015	95
M505-MW0028-025.0-20150520	J1504166-016	94
M505-MW0029-025.0-20150520	J1504166-017	96
M505-MW0030-025.0-20150520	J1504166-018	95
M505-MW0032-025.0-20150519	J1504166-019	95
M505-MW0033-025.0-20150519	J1504166-020	97
M505-MW0035-025.0-20150519	J1504166-021	93
M505-MW0039-032.5-20150520	J1504166-022	92
M505-MW0041-025.0-20150519	J1504166-023	96
M505-MW0042-035.0-20150519	J1504166-024	96
M505-MW0044-027.5-20150520	J1504166-025	96
M505-MW0045-034.5-20150519	J1504166-026	95
M505-MW0048-027.5-20150519	J1504166-027	96
M505-MW0049-027.5-20150519	J1504166-028	95
M505-MW0051-025.0-20150519	J1504166-029	95
M505-MW0052-010.0-20150519	J1504166-030	95
M505-MW0053-010.0-20150519	J1504166-031	93
M505-MW0055-025.0-20150519	J1504166-032	95
M505-MW0056-010.0-20150520	J1504166-033	95
M505-MW0057-025.0-20150520	J1504166-034	94
M505-MW0058-010.0-20150519	J1504166-035	94

Client: Levine Fricke **Service Request:** J1504166
Project: Building M7-505/TL014020.0002
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-MW0059-025.0-20150519	J1504166-036	95
Trip Blank	J1504166-037	93
M505-MW0040-022.5-20120520	J1504166-038	94
Lab Control Sample	JQ1503976-01	97
Duplicate Lab Control Sample	JQ1503976-02	97
Method Blank	JQ1503976-03	97
Lab Control Sample	JQ1503977-01	95
Duplicate Lab Control Sample	JQ1503977-02	96
Method Blank	JQ1503977-03	94

QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	05/28/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	446649

	Lab Control Sample JQ1503976-01			Duplicate Lab Control Sample JQ1503976-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	48.8	50.0	98	49.3	50.0	99	77-118	<1	30
1,1,1-Trichloroethane (TCA)	49.4	50.0	99	48.3	50.0	97	70-122	2	30
1,1,2,2-Tetrachloroethane	48.0	50.0	96	47.8	50.0	96	66-135	<1	30
1,1,2-Trichloroethane	47.5	50.0	95	48.4	50.0	97	75-122	2	30
1,1-Dichloroethane (1,1-DCA)	49.5	50.0	99	49.1	50.0	98	79-117	<1	30
1,1-Dichloroethene (1,1-DCE)	50.5	50.0	101	49.6	50.0	99	72-128	2	30
1,2,3-Trichlorobenzene	56.8	50.0	114	55.8	50.0	112	62-136	2	30
1,2,4-Trichlorobenzene	53.7	50.0	107	54.1	50.0	108	66-127	<1	30
1,2-Dibromo-3-chloropropane (DBCP)	55.3	50.0	111	52.4	50.0	105	60-122	5	30
1,2-Dibromoethane (EDB)	49.8	50.0	100	48.9	50.0	98	76-118	2	30
1,2-Dichlorobenzene	53.5	50.0	107	52.1	50.0	104	81-115	3	30
1,2-Dichloroethane	47.4	50.0	95	46.4	50.0	93	70-117	2	30
1,2-Dichloropropane	50.4	50.0	101	50.9	50.0	102	79-117	<1	30
1,3-Dichlorobenzene	53.1	50.0	106	52.0	50.0	104	82-116	2	30
1,4-Dichlorobenzene	50.6	50.0	101	50.1	50.0	100	82-115	1	30
2-Butanone (MEK)	50.1	50.0	100	51.0	50.0	102	62-138	2	30
2-Hexanone	53.2	50.0	106	51.9	50.0	104	74-127	3	30
4-Methyl-2-pentanone (MIBK)	53.7	50.0	107	53.0	50.0	106	77-120	1	30
Acetone	48.0	50.0	96	47.3	50.0	95	42-161	1	30
Benzene	53.4	50.0	107	52.9	50.0	106	80-117	<1	30
Bromochloromethane	47.6	50.0	95	48.8	50.0	98	78-118	2	30
Bromodichloromethane	49.9	50.0	100	49.5	50.0	99	75-118	<1	30
Bromoform	49.5	50.0	99	49.6	50.0	99	63-121	<1	30
Bromomethane	51.1	50.0	102	54.0	50.0	108	31-153	5	30
Carbon Disulfide	51.4	50.0	103	51.8	50.0	104	72-128	<1	30
Carbon Tetrachloride	49.8	50.0	100	49.2	50.0	98	67-124	1	30
Chlorobenzene	50.6	50.0	101	49.9	50.0	100	83-118	1	30
Chloroethane	48.5	50.0	97	44.7	50.0	89	68-132	8	30
Chloroform	48.1	50.0	96	48.3	50.0	97	77-116	<1	30
Chloromethane	56.1	50.0	112	59.3	50.0	119	60-128	6	30
cis-1,2-Dichloroethene	53.2	50.0	106	52.9	50.0	106	78-117	<1	30
cis-1,3-Dichloropropene	50.8	50.0	102	50.6	50.0	101	80-119	<1	30
Cyclohexane	50.6	50.0	101	51.8	50.0	104	75-124	2	30
Dibromochloromethane	50.3	50.0	101	50.7	50.0	101	74-121	<1	30
Dichlorodifluoromethane	45.4	50.0	91	45.0	50.0	90	49-132	<1	30
Ethylbenzene	50.8	50.0	102	51.9	50.0	104	82-119	2	30
Isopropylbenzene	53.7	50.0	107	53.8	50.0	108	78-119	<1	30
m,p-Xylenes	106	100	106	105	100	105	79-122	<1	30
Methyl Acetate	39.9	50.0	80	37.8	50.0	76	50-137	5	30
Methyl tert-Butyl Ether	54.3	50.0	109	54.6	50.0	109	73-118	<1	30
Methylene Chloride	48.4	50.0	97	47.6	50.0	95	75-123	2	30

QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	05/28/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	446649

	Lab Control Sample JQ1503976-01			Duplicate Lab Control Sample JQ1503976-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	49.6	50.0	99	50.2	50.0	100	80-119	1	30
Styrene	48.6	50.0	97	49.5	50.0	99	80-121	2	30
Tetrachloroethene (PCE)	50.9	50.0	102	51.6	50.0	103	75-126	1	30
Toluene	51.1	50.0	102	51.1	50.0	102	52-152	<1	30
trans-1,2-Dichloroethene	45.4	50.0	91	44.8	50.0	90	75-121	1	30
trans-1,3-Dichloropropene	53.6	50.0	107	53.5	50.0	107	76-118	<1	30
Trichloroethene (TCE)	50.4	50.0	101	50.9	50.0	102	78-122	1	30
Trichlorofluoromethane	46.3	50.0	93	46.3	50.0	93	58-134	<1	30
Trichlorotrifluoroethane	50.0	50.0	100	50.0	50.0	100	77-128	<1	30
Vinyl Chloride	51.5	50.0	103	51.6	50.0	103	69-138	<1	30

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	05/29/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	446650

	Lab Control Sample JQ1503977-01			Duplicate Lab Control Sample JQ1503977-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	46.7	50.0	93	46.5	50.0	93	77-118	<1	30
1,1,1-Trichloroethane (TCA)	49.8	50.0	100	50.5	50.0	101	70-122	1	30
1,1,2,2-Tetrachloroethane	44.9	50.0	90	43.5	50.0	87	66-135	3	30
1,1,2-Trichloroethane	45.0	50.0	90	44.2	50.0	88	75-122	2	30
1,1-Dichloroethane (1,1-DCA)	48.3	50.0	96	48.1	50.0	96	79-117	<1	30
1,1-Dichloroethene (1,1-DCE)	52.1	50.0	104	51.9	50.0	104	72-128	<1	30
1,2,3-Trichlorobenzene	53.4	50.0	107	52.6	50.0	105	62-136	1	30
1,2,4-Trichlorobenzene	50.5	50.0	101	49.8	50.0	100	66-127	1	30
1,2-Dibromo-3-chloropropane (DBCP)	48.6	50.0	97	47.4	50.0	95	60-122	3	30
1,2-Dibromoethane (EDB)	46.2	50.0	92	45.3	50.0	91	76-118	2	30
1,2-Dichlorobenzene	49.6	50.0	99	50.2	50.0	100	81-115	1	30
1,2-Dichloroethane	48.3	50.0	97	48.6	50.0	97	70-117	<1	30
1,2-Dichloropropane	49.0	50.0	98	49.3	50.0	99	79-117	<1	30
1,3-Dichlorobenzene	48.5	50.0	97	49.1	50.0	98	82-116	1	30
1,4-Dichlorobenzene	48.5	50.0	97	48.2	50.0	96	82-115	<1	30
2-Butanone (MEK)	49.6	50.0	99	47.4	50.0	95	62-138	4	30
2-Hexanone	47.0	50.0	94	46.2	50.0	92	74-127	2	30
4-Methyl-2-pentanone (MIBK)	49.0	50.0	98	47.4	50.0	95	77-120	3	30
Acetone	52.8	50.0	106	53.3	50.0	107	42-161	<1	30
Benzene	51.0	50.0	102	51.2	50.0	102	80-117	<1	30
Bromochloromethane	49.5	50.0	99	49.7	50.0	99	78-118	<1	30
Bromodichloromethane	49.2	50.0	98	48.9	50.0	98	75-118	<1	30
Bromoform	47.0	50.0	94	46.2	50.0	92	63-121	2	30
Bromomethane	59.6	50.0	119	62.2	50.0	124	31-153	4	30
Carbon Disulfide	51.3	50.0	103	51.6	50.0	103	72-128	<1	30
Carbon Tetrachloride	50.0	50.0	100	51.0	50.0	102	67-124	2	30
Chlorobenzene	48.0	50.0	96	47.6	50.0	95	83-118	<1	30
Chloroethane	48.2	50.0	96	47.3	50.0	94	68-132	2	30
Chloroform	47.3	50.0	95	48.0	50.0	96	77-116	2	30
Chloromethane	53.7	50.0	107	58.6	50.0	117	60-128	9	30
cis-1,2-Dichloroethene	51.3	50.0	103	52.1	50.0	104	78-117	2	30
cis-1,3-Dichloropropene	46.4	50.0	93	45.7	50.0	91	80-119	1	30
Cyclohexane	49.9	50.0	100	50.4	50.0	101	75-124	<1	30
Dibromochloromethane	47.8	50.0	96	47.0	50.0	94	74-121	2	30
Dichlorodifluoromethane	46.4	50.0	93	46.4	50.0	93	49-132	<1	30
Ethylbenzene	47.7	50.0	95	47.9	50.0	96	82-119	<1	30
Isopropylbenzene	50.6	50.0	101	50.0	50.0	100	78-119	1	30
m,p-Xylenes	97.6	100	98	99.6	100	100	79-122	2	30
Methyl Acetate	52.5	50.0	105	50.6	50.0	101	50-137	4	30
Methyl tert-Butyl Ether	51.1	50.0	102	51.1	50.0	102	73-118	<1	30
Methylene Chloride	47.8	50.0	96	47.2	50.0	94	75-123	1	30

Client:	Levine Fricke	**Service Request:**	J1504166
Project:	Building M7-505/TL014020.0002	**Date Analyzed:**	05/29/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	446650

	Lab Control Sample JQ1503977-01			Duplicate Lab Control Sample JQ1503977-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	48.1	50.0	96	47.0	50.0	94	80-119	2	30
Styrene	46.2	50.0	92	45.7	50.0	91	80-121	1	30
Tetrachloroethene (PCE)	46.3	50.0	93	47.5	50.0	95	75-126	3	30
Toluene	47.4	50.0	95	47.6	50.0	95	52-152	<1	30
trans-1,2-Dichloroethene	52.4	50.0	105	51.7	50.0	103	75-121	1	30
trans-1,3-Dichloropropene	49.7	50.0	99	48.9	50.0	98	76-118	2	30
Trichloroethene (TCE)	49.6	50.0	99	49.5	50.0	99	78-122	<1	30
Trichlorofluoromethane	50.6	50.0	101	50.5	50.0	101	58-134	<1	30
Trichlorotrifluoroethane	51.0	50.0	102	52.6	50.0	105	77-128	3	30
Vinyl Chloride	51.2	50.0	102	52.8	50.0	106	69-138	3	30

ALS Environmental

Cooler Receipt Form

Client: Arcadis Service Request #: J1504166

Project: _____

Cooler received on 5-21-15 and opened on 5-21-15 by JR

COURIER: ALS UPS (FEDEX) Client Other _____ Airbill # 8075 7387 8288

1	Were custody seals on outside of cooler?	(Yes)	No			
	If yes, how many and where?	#: 1	on lid	other		
2	Were seals intact and signature and date correct?	(Yes)	No	N/A		
3	Were custody papers properly filled out?	(Yes)	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C)	2.3				
5	Thermometer ID	T81				
6	Temperature Blank Present?	(Yes)	No			
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A		
9	Type of packing material present	Netting	Vial Holder	(Bubble Wrap)		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A		
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	(Yes)	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	(No)	N/A		
16	Where did the bottles originate?	(ALS)	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

-005 1of3, -008 2of3, -009 1of3, ~~-033~~ JR 5-21-15

-023 2of3

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1504166

ALS Environmental

9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

J1504166 **5**
Levine Fricke
Building M7-505

Project Name: Building M7-505	
Project Number: TL014020.0002	Report To: Scott Starr
Tampa FL, 33637	
Phone # 813-661-1810	FAX # 813-661-6043
Sampler Signature	Sampler Printed Name: DAVID DANKERC

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks
M505-EB-20150520		5/20/15	1400	Liquid	3	X							-0001
M505-MW0003I-030.0-20150519		5/19/15	1301	Liquid	3	X							2
M505-MW0004S-009.0-20150519		5/19/15	1224	Liquid	3	X							3
M505-MW0005-030.0-201505 20		5/20/15	1328	Liquid	3	X							4
M505-MW0007I-030.0-20150519		5/19/15	1052	Liquid	3	X							5
M505-MW0010IS-025.5-20150519		5/19/15	1135	Liquid	3	X							-025.5- 6
M505-MW0013IS-025.5-20150519		5/19/15	1627	Liquid	3	X							7
M505-MW0016-036.0-201505 19		5/19/15	1705	Liquid	3	X							1705 8
M505-MW0018-036.0-201505 19		5/19/15	1551	Liquid	3	X							9
M505-MW0019-025.0-201505 20		5/20/15	1237	Liquid	3	X							10

Special Instructions/Comments:

Turnaround Requirements
___ RUSH (SURCHARGES APPLY)
X Standard
REQUESTED FAX DATE
Requested Report Date

Report Requirements
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Cilibration Summaries
___ IV. Data Validation Report with Raw Data
EData _____Yes _____No

Invoice Information
P.O.#_____
Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: DAVID DANKERC	Signature: Lela Fischer	Signature	Signature	Signature	Signature
Printed Name: ARCADIS	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5/20/15 VIA Fedex	Firm: 5-21-15 1010 1715 JA	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5/22/15	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1504166

J1504166 5

Levine Fricke
Building M7-505

ALS Environmental

9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

Project Name: Building M7-505	
Project Number: TL014020.0002	Report To: Scott Starr
Tampa FL, 33637	
Phone #: 813-661-1810	FAX #: 813-661-6043
Sampler Signature	Sampler Printed Name: DAVID DANKERT

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks
M505-MW0020-036.0-201505	20	5/20/15	1153	Liquid	3		X						
M505-MW0021-025.5-201505	19	5/19/15	1657	Liquid	3		X						
M505-MW0023-025.0-201505	19	5/19/15	1742	Liquid	3		X						
M505-MW0025-025.0-201505	19	5/19/15	1505	Liquid	3		X						
M505-MW0027-025.0-201505	20	5/20/15	1145	Liquid	3		X						
M505-MW0028-025.0-201505	20	5/20/15	1053	Liquid	3		X						
M505-MW0029-025.0-201505	20	5/20/15	1334	Liquid	3		X						
M505-MW0030-025.0-201505	20	5/20/15	1221	Liquid	3		X						
M505-MW0032-025.0-201505	19	5/19/15	1240	Liquid	3		X						
M505-MW0033-025.0-201505	19	5/19/15	1213	Liquid	3		X						

5-21-15 DOH -011
-12
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Rev. 6.0 Page 1 of 145

Special Instructions/Comments:

Turnaround Requirements

___ RUSH (SURCHARGES APPLY)

X Standard

REQUESTED FAX DATE

Requested Report Date

Report Requirements

___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Cilibration Summaries
___ IV. Data Validation Report with Raw Data

EData _____Yes _____No

Invoice Information

P.O.#_____

Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: David Dankert	Printed Name: Lele Fischer	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Arcadis via Fedex	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5-21-15 1010 JA 5/22/15	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1504166

J1504166 5

Levine Fricke
Building M7-505



ALS Environmental

9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

Project Name: Building M7-505	
Project Number: TL014020.0002	Report To: Scott Starr
Tampa FL, 33637	
Phone # 813-661-1810	FAX # 813-661-6043
Sampler Signature	Sampler Printed Name: David Danker

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks	
M505-MW0035-025.0-201505	19	5/19/15	1318	Liquid	3		X							21
M505-MW0039-032.5-201505	20	5/20/15	0947	Liquid	3		X							22
M505-MW0041-025.0-201505	19	5/19/15	1344	Liquid	3		X							23
M505-MW0042-035.0-201505	19	5/19/15	1419	Liquid	3		X							24
M505-MW0044-027.5-201505	20	5/20/15	1106	Liquid	3		X							25
M505-MW0045-034.5-201505	19	5/19/15	1007	Liquid	3		X							26
M505-MW0048-027.5-201505	19	5/19/15	1551	Liquid	3		X							27
M505-MW0049-027.5-201505	19	5/19/15	1429	Liquid	3		X							28
M505-MW0051-025.0-201505	19	5/19/15	1137	Liquid	3		X							29
M505-MW0052-010.0-201505	19	5/19/15	1028	Liquid	3		X							30

Special Instructions/Comments:

Turnaround Requirements

___ RUSH (SURCHARGES APPLY)

_X_ Standard

REQUESTED FAX DATE

Requested Report Date

Report Requirements

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Cilibration Summaries

___ IV. Data Validation Report with Raw Data

EData _____Yes _____No

Invoice Information

P.O.#_____

Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: DAVID DANKERT	Signature: Lela Fisher	Signature	Signature	Signature	Signature
Printed Name: ARCADIS	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5/20/15 4th Fed ex	Firm: 5-21-15 ~~1715~~ 1010	Firm	Firm	Firm	Firm
Date/Time	Date/Time: MAY 22 15	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY / LABORATORY ANALYSIS REQUEST FORM

SR# J1504166

ALS Environmental
9143 Phillips Highway, Suite 200, Jacksonville, FL 32256
Phone (904) 739-2277 / 800-695-7222 x06 / FAX (904) 739-2011

J1504166 5
Levine Fricke
Building M7-505

Project Name: Building M7-505			
Project Number: TL014020.0002	Report To: Scott Starr		
Tampa FL, 33637			
Phone # 813-661-1810	FAX # 813-661-6043		
Sampler Signature	Sampler Printed Name: David Dankel		

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	14D	8260B / VOC_FP	1	2	3	4	5	Remarks	
M505-MW0053-010.0-201505	19	5/19/15	1059	Liquid	3		X							31
M505-MW0055-025.0-201505	19	5/19/15	0949	Liquid	3		X							32
M505-MW0056-010.0-201505	20	5/20/15	0944	Liquid	3		X							33
M505-MW0057-025.0-201505	20	5/20/15	1016	Liquid	3		X							34
M505-MW0058-010.0-201505	19	5/19/15	1617	Liquid	3		X							35
M505-MW0059-025.0-201505	19	5/19/15	1543	Liquid	3		X							36
Trip Blank		5/21/15		Liquid	2		X							37
38. M505-MW0040-022.5-201505	20	5/20/15	1022	Liquid	2		X						-022.5-	38
39.				Liquid										
40.				Liquid										

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Special Instructions/Comments:

Turnaround Requirements
___ RUSH (SURCHARGES APPLY)
X Standard
REQUESTED FAX DATE
Requested Report Date

Report Requirements
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Cilibration Summaries
___ IV. Data Validation Report with Raw Data
EData _____Yes _____No

Invoice Information
P.O.#_____
Bill To:_____

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: DAVID DANKEL	Signature: Lela Fisher	Signature	Signature	Signature	Signature
Printed Name: Arcadis	Printed Name: ALS	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5/20/15 via Fedex	Firm: 5-21-15 1010 17:15	Firm	Firm	Firm	Firm
Date/Time	Date/Time: JA 5/22/15	Date/Time	Date/Time	Date/Time	Date/Time

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0003I	SAMPLE ID: M505-0003I-0[illegible]-2015 0519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.83	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet):	FINAL PUMP OR TUBING DEPTH IN WELL (feet):	PURGING INITIATED AT: 1234	PURGING ENDED AT: 1300	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1254	1.0	1.0	0.05	7.85	6.98	26.6	746	0.26	8.16	clear	none	-49.5
1257	0.15	1.15	0.05	7.85	6.97	26.6	748	0.24	9.12	〃	〃	-50.1
1300	0.15	1.30	0.05	7.85	6.97	26.6	750	0.21	8.44	〃	〃	-50.9

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1301	SAMPLING ENDED AT: 1304
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-3I	3	CG	40ml	HCl	–	–	8260	BP	~200

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0048	SAMPLE ID: M505-MW0048-009.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 4 feet to 14 feet	STATIC DEPTH TO WATER (feet): 6.33	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (14 feet – 6.33 feet) X .16 gallons/foot = 1.22 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 9'	PURGING INITIATED AT: 1155	PURGING ENDED AT: 1223	TOTAL VOLUME PURGED (gallons): 1.65

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1217	1.2	1.2	0.05	6.40	6.58	27.5	518	0.79	4.06	clear	none	+46.6
1220	0.15	1.35	0.05	6.40	6.58	27.5	517	0.83	4.12	"	"	+46.7
1223	0.15	1.50	0.05	6.40	6.58	27.5	516	0.81	4.08	"	"	

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankel / AMS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1224	SAMPLING ENDED AT: 1227

PUMP OR TUBING DEPTH IN WELL (feet): 9'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-48	3	CG	40ml	HCL	—	—	8260	APP	200

REMARKS: 1224

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0005I	SAMPLE ID: M505-MW0005-030.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.36	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .(gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 30	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 30	PURGING INITIATED AT: 1255	PURGING ENDED AT: 1327	TOTAL VOLUME PURGED (gallons): 1.60

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1315	1.0	1.0	0.05	7.44	6.61	27.8	3595	0.23	23.3	clear	none	-16.6
1318	0.15	1.15	0.05	7.44	6.61	27.8	3595	0.21	20.8	v/Tiny		-16.9
1321	0.15	1.30	0.05	74.44	6.60	22.9	3597	0.19	19.8	particles		-17.3
1324	0.15	1.45	0.05	74.45	6.60	22.9	3599	0.18	19.5	" "		-17.6
1327	0.15	1.60	0.05	74.45	6.60	27.9	3596	0.21	19.1	" "		-18.3

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1328	SAMPLING ENDED AT: 1331

PUMP OR TUBING DEPTH IN WELL (feet): 30'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0005	3	CG	40ml	HCL	-	-	8260	APP	~200

REMARKS: 1328

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-7I	SAMPLE ID: M505-MW0007-030-C-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 25 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.29	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 030.0	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 30'	PURGING INITIATED AT: 1025	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1045	1.0	1.0	0.05	7.31	6.67	22.1	2300	0.20	8.45	clear	none	-46.2
1048	0.15	1.15	0.05	7.31	6.67	22.1	2302	0.18	8.12	〃	〃	-46.0
1051	0.15	1.30	0.05	7.31	6.67	22.1	2304	0.17	8.06	〃	〃	-45.8

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David VanKarl - AVC	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1052	SAMPLING ENDED AT: 1055
PUMP OR TUBING DEPTH IN WELL (feet): 30'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-7	3	CG	40 mL	HCl	-	-	8260	APP	~200

REMARKS: 1052

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0010IS	SAMPLE ID: MW0010IS-025.8-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 2"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 7.36	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	PURGING INITIATED AT: 1108	PURGING ENDED AT: 1134	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1128	1.0	1.0	0.05	7.43	6.85	27.4	2506	3.30	6.12	clear	none	+118.0
1131	0.15	1.15	0.05	7.43	6.85	27.4	2508	3.32	5.86	↓	↓	+118.6
1134	0.15	1.30	0.05	7.43	6.85	27.4	2510	3.31	4.96	↓	↓	+119.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dawkal/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1135	SAMPLING ENDED AT: 1138
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW1015	3	Ca	40ml	HCl	–	–	8260	APP	~200

REMARKS:
High turbidity but stable @ ~2.30 mg/L
1135

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0013IS	SAMPLE ID: M505-MW0013IS-025.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (Inches): 2"	TUBING DIAMETER (Inches): 3/16	WELL SCREEN INTERVAL DEPTH: 23 feet to 28 feet	STATIC DEPTH TO WATER (feet): 7.83	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25.5	PURGING INITIATED AT: 1600	PURGING ENDED AT: 1626	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1620	1.0	1.0	0.05	7.89	6.97	25.9	2829	4.11	1.80	clear	none	+125.4
1623	0.15	1.15	0.05	7.89	6.97	25.9	2831	4.10	2.16	"	"	+126.2
1626	0.15	1.30	0.05	7.88	6.98	25.9	2835	4.12	2.06	"	"	+127.3

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David VanKuren/AVS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1627	SAMPLING ENDED AT: 1630
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-13IS	3	CG	40ml	HCl	—	—	8260	APP	~200

REMARKS: PID high but stable @ ~4.10 mg/L 1627

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0016	SAMPLE ID: M505-MW0016-036.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 2.05	PURGE PUMP TYPE ●R BAILER:

WELL VOLUME PURGE: 1 WELL VOLUME = (T●TAL WELL DEPTH – STATIC DEPTH T● WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FL●W CELL V●LUME
(only fill out if applicable)
= gallons + (1 0014 gallons/foot X 45 feet) + .1 gallons = .15 gallons

INITIAL PUMP ●R TUBING DEPTH IN WELL (feet): 36'	FINAL PUMP ●R TUBING DEPTH IN WELL (feet): 36'	PURGING INITIATED AT: 1638	PURGING ENDED AT: 1704	TOTAL VOLUME PURGED (gallons): 1.38

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1658	1.0	1.0	0.05		6.77	28.0	3410	0.58	5.96	clear	none	+100.8
1701	0.15	1.15	0.05		6.77	28.6	3414	0.57	6.12	"	"	+100.2
1704	0.15	1.30	0.05		6.77	28.8	3417	0.55	5.87	"	"	+99.7

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S' 'GNATURE(S):	SAMPLING INITIATED AT: 1705	SAMPLING ENDED AT: 1708
PUMP OR TUBING DEPTH IN WELL (feet): 36'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y N Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y N	TUBING Y N (replaced)	DUPLICATE: Y N	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-16	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1705

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0018	SAMPLE ID: M505-MW0018-036.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 7.37	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 95 feet) + 1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36'	PURGING INITIATED AT: 1524	PURGING ENDED AT: 1550	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1544	1.0	1.0	0.05	7.43	6.64	26.6	3358	0.27	11.8	clear	none	+63.1
1547	0.15	1.15	0.05	7.43	6.64	26.6	3356	0.25	10.2	"	"	+64.9
1550	0.15	1.30	0.05	7.44	6.64	26.6	3354	0.24	9.62	"	"	+65.3

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1551	SAMPLING ENDED AT: 1554
PUMP OR TUBING DEPTH IN WELL (feet): 36'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW18	3	CG	40 mL	HCl	–	–	8260	APP	~200

REMARKS: 1551

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0019	SAMPLE ID: M505-MW0019-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.51	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1210	PURGING ENDED AT: 1236	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1230	1.0	1.0	0.05	7.63	6.78	28.5	3506	0.40	6.14	clear	none	-11.3
1233	0.15	1.15	0.05	7.63	6.77	28.5	3505	0.38	5.82	″	″	-11.1
1236	0.15	1.30	0.05	7.63	6.77	28.6	3504	0.39	5.24	″	″	-10.9

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1237	SAMPLING ENDED AT: 1240
PUMP OR TUBING DEPTH IN WELL (feet): 25'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW19	3	CG	40ml	HCl		—	8260	APP	~200

REMARKS: 1237

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0020	SAMPLE ID: M505-MW0020-0335.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 33.5 feet to 38.5 feet	STATIC DEPTH TO WATER (feet): 7.33	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = 1.5 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 36	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 36	PURGING INITIATED AT: 1126	PURGING ENDED AT: 1152	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) ~~mg/L~~ or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1146	1.0	1.0	0.05	7.71	6.71	27.9	3890	0.19	10.0	clear	none	+94.8
1149	0.15	1.15	0.05	7.71	6.71	27.9	3890	0.17	9.84	"	"	+94.9
1152	0.15	1.30	0.05	7.71	6.71	28.0	3892	0.16	9.14	"	"	+95.2

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David DanKert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1153	SAMPLING ENDED AT: 1156
PUMP OR TUBING DEPTH IN WELL (feet): 36	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW20	3	CA	40 ml	HCL	—	—	8260	APP	~200

REMARKS: 1153

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0021	SAMPLE ID: M505-MW0021-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 4.24	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1638	PURGING ENDED AT: 1655	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1646	0.40	0.40	0.05	4.48	7.03	26.5	1099	0.23	2.25	clear	none	-135
1649	0.15	0.55	|	4.48	7.05	26.4	1114	0.20	1.09	|	|	-140
1652	0.15	0.70	|	4.47	7.05	26.3	1109	0.19	0.24	|	|	-143
1655	0.15	0.85	|	4.47	7.06	26.3	1114	0.16	0.11	|	|	-148

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DOW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1657	SAMPLING ENDED AT: 1701

PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N (replaced)) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-21	3	AG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0023	SAMPLE ID: M505-MW0023-025-U-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.04	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 35 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1715	PURGING ENDED AT: 1741	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1735	1.0	1.0	0.05	7.11	6.83	25.7	2727	0.20	2.16	clear	none	+1.2
1738	0.15	1.15	0.05	7.11	6.83	25.7	2729	0.18	2.42	↓	↓	+1.9
1741	0.15	1.30	0.05	7.11	6.84	25.7	2732	0.19	2.12	↓	↓	+2.7

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Danker-1 - AVS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1742	SAMPLING ENDED AT: 1745
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW23	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1742

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0025	SAMPLE ID: M505-MW0025-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 9.03	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1446	PURGING ENDED AT: 1503	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L or) % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1454	0.40	0.40	0.05	9.15	6.59	25.9	3481	0.42	2.38	clear	none	-82
1457	0.15	0.55	|	9.15	6.59	25.8	3473	0.40	1.41	|	|	-88
1500	0.15	0.70	|	9.15	6.58	25.7	3471	0.38	1.16	|	|	-91
1503	0.15	0.85	|	9.15	6.58	25.7	3468	0.38	0.77	|	|	-93

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DVW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1505	SAMPLING ENDED AT: 1509
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-25	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0027	SAMPLE ID: M505-MW0027-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 1/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.91	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1126	PURGING ENDED AT: 1143	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1134	0.40	0.40	0.05	7.96	6.77	28.1	1173	0.41	1.47	clear	none	-139
1137	0.15	0.55	"	7.98	6.77	28.0	1176	0.39	1.31	"	"	-139
1140	0.15	0.70	"	7.99	6.76	27.9	1179	0.35	3.04	"	"	-142
1143	0.15	0.85	"	7.99	6.76	27.8	1179	0.32	1.32	"	"	-143

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / ArcaDis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1145	SAMPLING ENDED AT: 1149
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-27	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0028	SAMPLE ID: M505-MW0028-0250-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 4.00	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1034	PURGING ENDED AT: 1051	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L or % saturation)	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1042	0.40	0.40	0.05	4.24	6.89	25.7	1152	0.23	1.67	Clear	none	-124
1045	0.15	0.55	"	4.28	6.89	25.5	1151	0.19	1.36	"	"	-129
1048	0.15	0.70	"	4.27	6.89	25.4	1166	0.14	1.22	"	"	-134
1051	0.15	0.85	"	4.27	6.89	25.5	1166	0.17	1.04	"	"	-131

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW/ ArcaDis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1053	SAMPLING ENDED AT: 1057
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW28	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0029	SAMPLE ID: M505-MW0029-025-0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.60	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1315	PURGING ENDED AT: 1332	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1323	0.40	0.40	0.05	5.80	7.08	27.0	1532	0.47	2.20	clear	none	-122
1326	0.15	0.55	"	5.80	7.07	26.9	1544	0.36	1.22	"	"	-127
1329	0.15	0.70	"	5.80	7.07	26.8	1550	0.36	0.84	"	"	-129
1332	0.15	0.85	"	5.80	7.07	27.0	1552	0.36	0.61	"	"	-129

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJL / ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1334	SAMPLING ENDED AT: 1338
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-29	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0030	SAMPLE ID: M505-MW0030-025.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.57	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1202	PURGING ENDED AT: 1219	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1210	0.40	0.40	0.05	8.69	7.20	26.8	1609	0.75	2.33	clear	none	+107
1213	0.15	0.55	"	8.70	7.19	26.6	1635	0.42	2.46	"	"	+117
1216	0.15	0.70	"	8.70	7.19	26.5	1643	0.30	1.91	"	"	+127
1219	0.15	0.85	"	8.70	7.19	26.7	1653	0.28	2.74	"	"	+132

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1221	SAMPLING ENDED AT: 1225
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
mw30	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0032	SAMPLE ID: M505-MW0032-035.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 9.22	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 45 feet) + 0.1 gallons = 0.16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35	PURGING INITIATED AT: 1221	PURGING ENDED AT: 1238	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1229	0.40	0.40	0.05	9.84	6.83	27.0	2634	0.71	4.82	clear	none	-36
1232	0.15	0.55	"	9.87	6.82	27.1	2633	0.63	3.98	"	"	-42
1235	0.15	0.70	"	9.86	6.82	26.9	2634	0.55	1.17	"	"	-46
1238	0.15	0.85	"	9.86	6.82	26.9	2623	0.54	1.26	"	"	-48

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1240	SAMPLING ENDED AT: 1244
PUMP OR TUBING DEPTH IN WELL (feet): 35	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-32	3	C6	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); **optionally, ± 0.2 mg/L or ± 10% (whichever is greater) Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0033	SAMPLE ID: M505-MW0033-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 9.09	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1154	PURGING ENDED AT: 1211	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1202	0.40	0.40	0.05	9.21	6.75	26.6	2659	0.79	5.85	Clear	none	-20
1205	0.15	0.55	"	9.21	6.74	26.8	2655	0.65	6.50	"	"	-25
1208	0.15	0.70	"	9.21	6.73	26.6	2659	0.58	4.88	"	"	-31
1211	0.15	0.85	"	9.21	6.72	26.7	2654	0.47	3.91	"	"	-39

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1213	SAMPLING ENDED AT: 1217
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-33	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0035	SAMPLE ID: MW505-MW0035-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.21	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 50 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1259	PURGING ENDED AT: 1316	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1307	0.40	0.40	0.05	5.60	6.73	27.9	2933	0.31	2.71	Clear	None	-72
1310	0.15	0.55	|	5.60	6.72	28.0	2912	0.26	2.26	|	|	-75
1313	0.15	0.70	|	5.60	6.72	28.1	2911	0.24	2.11	|	|	-79
1316	0.15	0.85	|	5.59	6.72	28.2	2910	0.23	2.13	|	|	-81

WELL CAPACITY (Gallons Per Foot): 0.75" = 0.02; 1" = 0.04; 1.25" = 0.06; 2" = 0.16; 3" = 0.37; 4" = 0.65; 5" = 1.02; 6" = 1.47; 12" = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; 1/4" = 0.0026; 5/16" = 0.004; 3/8" = 0.006; 1/2" = 0.010; 5/8" = 0.016

PURGING EQUIPMENT CODES: B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; PP = Peristaltic Pump; O = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DVL / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1318	SAMPLING ENDED AT: 1322
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-35	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: AG = Amber Glass; CG = Clear Glass; PE = Polyethylene; PP = Polypropylene; S = Silicone; T = Teflon; O = Other (Specify)

SAMPLING EQUIPMENT CODES: APP = After Peristaltic Pump; B = Bailer; BP = Bladder Pump; ESP = Electric Submersible Pump; RFPP = Reverse Flow Peristaltic Pump; SM = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-39	SAMPLE ID: M505-MW0039-032.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 30 feet to 35 feet	STATIC DEPTH TO WATER (feet): 6.72	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 32.5	PURGING INITIATED AT: 0920	PURGING ENDED AT: 0946	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0940	1.0	1.0	0.05	7.05	6.60	25.9	3298	0.28	3.14	clear	NONE	+104.2
0943	0.15	1.15	0.05	7.05	6.60	25.9	3301	0.26	2.86	"	"	+104.1
0946	0.15	1.30	0.05	7.05	6.60	25.9	3304	0.24	2.76	"	"	+103.8

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dandler/Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0947	SAMPLING ENDED AT: 0950
PUMP OR TUBING DEPTH IN WELL (feet): 32.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-39	3	CG	40 ml	HCl	—	—	8260	APP	~200

REMARKS: 0947

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0041	SAMPLE ID: M505-mw0041-GW-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 7.23	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 30 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1317	PURGING ENDED AT: 1343	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1337	1.0	1.0	0.05	7.32	6.54	27.0	2259	0.23	2.16	clear	none	-31.5
1340	0.15	1.15	0.05	7.32	6.54	27.0	2261	0.22	3.04	"	"	-31.8
1343	0.15	1.30	0.05	7.32	6.55	27.0	2263	0.20	2.42	"	"	-32.3

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Stanford / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1344	SAMPLING ENDED AT: 1347
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW41	3	CG	40ml	HCl	—	—	8260	APP	~200

REMARKS: 1344

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0042	SAMPLE ID: M505-MW0042-035,0-20151519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32.5 feet to 37.5 feet	STATIC DEPTH TO WATER (feet): 7.26	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 40 feet) + .1 gallons = .15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 35'	PURGING INITIATED AT: 1352	PURGING ENDED AT:	TOTAL VOLUME PURGED (gallons):

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1412	1.0	1.0	0.05	7.35	6.64	26.7	3137	0.21	4.16	clear	none	-34.7
1415	0.15	1.15	0.05	7.35	6.64	26.7	3139	0.19	4.02	"	"	-35.1
1418	0.15	1.30	0.05	7.35	6.65	26.7	3141	0.17	3.97	"	"	-35.7

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Danker/AWS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1419	SAMPLING ENDED AT: 1422

PUMP OR TUBING DEPTH IN WELL (feet): 35'	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm

FIELD DECONTAMINATION: PUMP Y (N) TUBING Y (N) (replaced) DUPLICATE: Y (N)

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)

REMARKS: 1419

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-44	SAMPLE ID: M505-MW0044-027.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 6.50	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet – 6.50 feet) X .04 gallons/foot = 1.14 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1035	PURGING ENDED AT: 1105	TOTAL VOLUME PURGED (gallons): 1.50

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1059	1.2	1.2	0.05	6.65	6.60	26.5	3503	0.14	7.15	clear	none	+75.1
1102	0.15	1.35	0.05	6.65	6.60	26.5	3507	0.12	5.17	"	"	+76.1
1105	0.15	1.50	0.05	6.65	6.60	26.6	3511	0.11	6.82	"	"	+76.8

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: B = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1106	SAMPLING ENDED AT: 1109
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-44	3	CG	40ml	HCl	–	–	8260	APP	~200

REMARKS: 1106

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, [illegible]

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0045	SAMPLE ID: M505-MW0045-034.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 32 feet to 37 feet	STATIC DEPTH TO WATER (feet): 7.16	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (.0014 gallons/foot X 45 feet) + .1 gallons = .16 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 34.5	PURGING INITIATED AT: 0940	PURGING ENDED AT: 1006	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1000	1.0	1.0	0.05	7.37	6.71	26.5	3440	0.35	2.04	clear	none	-89.7
1003	0.15	1.15	0.05	7.37	6.71	26.5	3442	0.33	1.96	"	"	-89.2
1006	0.15	1.30	0.05	7.37	6.71	26.5	3445	0.31	1.87	"	"	-88.7

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David DanKel / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1007	SAMPLING ENDED AT: 1010
PUMP OR TUBING DEPTH IN WELL (feet): 34.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW45	3	CG	40ml	HCl	–	–	~~APP~~ VOCs	APP	~200

REMARKS: sampled @ 1007

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0048	SAMPLE ID: M505-MW0048-027.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches):	TUBING DIAMETER (inches):	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 7.23	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (35 feet − 7.23 feet) X .04 gallons/foot = 1.11 gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= gallons + (gallons/foot X feet) + gallons = gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1440	PURGING ENDED AT: 1506	TOTAL VOLUME PURGED (gallons): 1.82

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1500	1.4	1.4	0.07	7.28	6.61	27.5	3271	0.33	19.6	clear	none	-77.5
1503	0.21	1.61	0.07	7.28	6.62	27.5	3273	0.31	18.7	〃	〃	-76.8
1506	0.21	1.82	0.07	7.28	6.60	27.6	3275	0.29	18.2	〃	〃	-76.1

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert-AUS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1507	SAMPLING ENDED AT: 1510
PUMP OR TUBING DEPTH IN WELL (feet):	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW48	3	cG	40ml	HCL	-	-	8260	APP	~200

REMARKS: 1507

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0049	SAMPLE ID: M505-MW0049-027.5-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (Inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 35 feet	STATIC DEPTH TO WATER (feet): 9.45	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 27.5	PURGING INITIATED AT: 1410	PURGING ENDED AT: 1427	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1418	0.40	0.40	0.05	9.53	6.75	26.6	2680	0.36	8.94	clear	none	-81
1421	0.15	0.55	"	9.54	6.73	26.5	2665	0.27	2.63	"	"	-89
1424	0.15	0.70	"	9.54	6.73	26.5	2662	0.27	1.17	"	"	-90
1427	0.15	0.85	"	9.54	6.71	26.6	2660	0.26	0.76	"	"	-91

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1429	SAMPLING ENDED AT: 1433
PUMP OR TUBING DEPTH IN WELL (feet): 27.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW49	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0051	SAMPLE ID: M505-MW-0051-025-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (Inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.07	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1118	PURGING ENDED AT: 1135	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or ~~µS/cm~~	DISSOLVED OXYGEN (circle units) mg/L or ~~% saturation~~	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1126	0.40	0.40	0.05	8.57	7.12	25.7	3121	0.15	1.12	Clear	none	-198
1129	0.15	0.55	"	8.58	7.11	25.7	3127	0.15	0.79	Clear	none	-197
1132	0.15	0.70	"	8.59	7.09	25.6	3134	0.16	7.24	"	"	-195
1135	0.15	0.85	"	8.61	7.07	25.6	3138	0.15	0.69	"	"	-191

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1137	SAMPLING ENDED AT: 1141
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0051	3	CG	40ML	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0052	SAMPLE ID: M505-MW0052-010.0 20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 8.24	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.1 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1009	PURGING ENDED AT: 1026	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1017	0.40	0.40	0.05	8.33	6.17	24.3	414	0.37	7.4	clear	none	-43
1020	0.15	0.55	"	8.33	6.11	24.2	390	0.36	7.9	"	"	-46
1023	0.15	0.70	"	8.32	6.05	24.2	388	0.33	8.4	"	"	-49
1026	0.15	0.85	"	8.34	6.00	24.3	374	0.27	7.7	"	"	-53

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DLW / ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1028	SAMPLING ENDED AT: 1032
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-52	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0053	SAMPLE ID: M505-MW0053-010.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 7.05	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 10 feet) + 0.1 gallons = 0.17 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1040	PURGING ENDED AT: 1057	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1048	0.40	0.40	0.05	7.10	7.09	24.6	2864	6.36	0.83	Clear	None	+39
1051	0.15	0.55	"	7.10	7.17	24.7	2870	6.29	0.77	"	"	+39
1054	0.15	0.70	"	7.10	7.18	24.7	2873	6.19	1.13	"	"	+39
1057	0.15	0.85	"	7.10	7.19	24.6	2873	6.25	0.49	"	"	+39

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1059	SAMPLING ENDED AT: 1103
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW53	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0055	SAMPLE ID: M505-MW0055-25.0 (20150519)	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 8.04	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH − STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet − feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0930	PURGING ENDED AT: 0947	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0938	0.40	0.40	0.05	8.24	6.64	24.5	3804	0.31	1.18	clear	none	-139
0941	0.15	0.55	"	8.24	6.68	24.4	3809	0.28	0.97	"	"	-143
0944	0.15	0.70	"	8.24	6.73	24.3	3805	0.28	0.61	"	"	-151
0947	0.15	0.85	"	8.24	6.74	24.3	3806	0.33	0.45	"	"	-152

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0949	SAMPLING ENDED AT: 0953
PUMP OR TUBING DEPTH IN WELL (feet): 25.0	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW55	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS: Note: ⊗ AGP lid would not close. Cut exactly 2.0 off of well. Survey height will be 2" lower.

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0056	SAMPLE ID: M505-MW0056-010.0-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 4.53	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 25 feet) + 0.1 gallons = 0.12 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 0925	PURGING ENDED AT: 0942	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
0933	0.40	0.40	0.05	5.62	6.35	25.6	540	0.58	2.40	clear	none	-185
0936	0.15	0.55		5.62	6.36	25.5	538	0.44	2.44			-188
0939	0.15	0.70		5.62	6.36	25.4	536	0.40	2.31			-192
0942	0.15	0.85		5.62	6.37	25.4	534	0.29	2.17			-196

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./FL): 1/8" = 0.0006; 3/16" = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DWI / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 0944	SAMPLING ENDED AT: 0948
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
mw56	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0057	SAMPLE ID: m505-mw0057-0.250-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.25	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 40 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 0957	PURGING ENDED AT: 1014	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (mS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1005	0.40	0.40	0.05	5.40	6.71	26.1	1244	0.30	0.96	Clear	none	-122
1008	0.15	0.55	"	5.40	6.71	26.1	1246	0.30	1.16	"	"	-123
1011	0.15	0.70	"	5.40	6.71	26.1	1248	0.28	2.59	"	"	-124
1014	0.15	0.85	"	5.40	6.71	26.1	1249	0.26	2.19	"	"	-125

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / ArcaDis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1016	SAMPLING ENDED AT: 1020
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-57	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0058	SAMPLE ID: M505-MW0058-010.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 5 feet to 15 feet	STATIC DEPTH TO WATER (feet): 3.68	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + (0.0014 gallons/foot X 20 feet) + 0.1 gallons = 0.13 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 10	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 10	PURGING INITIATED AT: 1558	PURGING ENDED AT: 1615	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or µS/cm	DISSOLVED OXYGEN (circle units) mg/L or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1606	0.40	0.40	0.05	4.51	5.98	29.3	357	0.42	4.83	Clear	None	-121
1609	0.15	0.55		4.54	5.98	29.4	359	0.36	3.93			-128
1612	0.15	0.70		4.58	5.98	29.4	367	0.32	3.24			-136
1615	0.15	0.85		4.60	5.99	29.4	372	0.29	2.89			-140

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: OVW / ARCADIS	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1617	SAMPLING ENDED AT: 1621
PUMP OR TUBING DEPTH IN WELL (feet): 10	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y N (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-58	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; T = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); O = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW-0059	SAMPLE ID: M505-MW-0059-025.0-20150519	DATE: 5/19/15

PURGING DATA

WELL DIAMETER (inches): 1	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 22.5 feet to 27.5 feet	STATIC DEPTH TO WATER (feet): 5.17	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)
= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)
= 0 gallons + 0.0014 gallons/foot X 35 feet) + 0.1 gallons = 0.15 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 25	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 25	PURGING INITIATED AT: 1524	PURGING ENDED AT: 1541	TOTAL VOLUME PURGED (gallons): 0.85

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or (µS/cm)	DISSOLVED OXYGEN (circle units) (mg/L) or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1532	0.40	0.40	0.05	5.27	6.62	26.7	1166	0.29	1.46	clear	none	-98
1535	0.15	0.55	|	5.27	6.61	26.6	1165	0.27	1.12	|	|	-101
1538	0.15	0.70	|	5.27	6.61	26.5	1166	0.21	0.71	|	|	-106
1541	0.15	0.85	|	5.27	6.61	26.5	1166	0.20	0.84	|	|	-109

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: DJW / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1543	SAMPLING ENDED AT: 1547
PUMP OR TUBING DEPTH IN WELL (feet): 25	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N (replaced))	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW-59	3	CG	40mL	HCL	—	—	8260B	APP	~190

REMARKS:

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**
2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)
pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

Form FD 9000-24

GROUNDWATER SAMPLING LOG

SITE NAME: NASA M505	SITE LOCATION: KSC NASA	
WELL NO: MW0040	SAMPLE ID: M505-MW0040-022.5-20150520	DATE: 5/20/15

PURGING DATA

WELL DIAMETER (inches): 1"	TUBING DIAMETER (inches): 3/16	WELL SCREEN INTERVAL DEPTH: 20 feet to 25 feet	STATIC DEPTH TO WATER (feet): 7.05	PURGE PUMP TYPE OR BAILER: PP

WELL VOLUME PURGE: 1 WELL VOLUME = (TOTAL WELL DEPTH – STATIC DEPTH TO WATER) X WELL CAPACITY
(only fill out if applicable)

= (feet – feet) X gallons/foot = gallons

EQUIPMENT VOLUME PURGE: 1 EQUIPMENT VOL. = PUMP VOLUME + (TUBING CAPACITY X TUBING LENGTH) + FLOW CELL VOLUME
(only fill out if applicable)

= gallons + (.0014 gallons/foot X 30 feet) + .1 gallons = .14 gallons

INITIAL PUMP OR TUBING DEPTH IN WELL (feet): 22.5	FINAL PUMP OR TUBING DEPTH IN WELL (feet): 22.5	PURGING INITIATED AT: 0955	PURGING ENDED AT: 1021	TOTAL VOLUME PURGED (gallons): 1.30

TIME	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (gpm)	DEPTH TO WATER (feet)	pH (standard units)	TEMP (°C)	COND (circle units) µmhos/cm or mS/cm	DISSOLVED OXYGEN (circle units) mg/l or % saturation	TURBIDITY (NTUs)	COLOR (describe)	ODOR (describe)	ORP
1015	1.0	1.0	0.05	7.20	6.79	26.1	1438	0.25	4.26	clear	none	54.6
1018	0.15	1.15	0.05	7.20	6.79	26.2	1441	0.23	3.87	〃	〃	53.6
1021	0.15	1.30	0.05	7.20	6.78	26.2	1447	0.21	3.64	〃	〃	52.4

WELL CAPACITY (Gallons Per Foot): **0.75"** = 0.02; **1"** = 0.04; **1.25"** = 0.06; **2"** = 0.16; **3"** = 0.37; **4"** = 0.65; **5"** = 1.02; **6"** = 1.47; **12"** = 5.88
TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"** = 0.0006; **3/16"** = 0.0014; **1/4"** = 0.0026; **5/16"** = 0.004; **3/8"** = 0.006; **1/2"** = 0.010; **5/8"** = 0.016

PURGING EQUIPMENT CODES: **B** = Bailer; **BP** = Bladder Pump; **ESP** = Electric Submersible Pump; **PP** = Peristaltic Pump; **O** = Other (Specify)

SAMPLING DATA

SAMPLED BY (PRINT) / AFFILIATION: David Dankert / Arcadis	SAMPLER(S) SIGNATURE(S):	SAMPLING INITIATED AT: 1022	SAMPLING ENDED AT: 1025
PUMP OR TUBING DEPTH IN WELL (feet): 22.5	TUBING MATERIAL CODE: HDPE	FIELD-FILTERED: Y (N) Filtration Equipment Type:	FILTER SIZE: ____ µm
FIELD DECONTAMINATION: PUMP Y (N)	TUBING Y (N) (replaced)	DUPLICATE: Y (N)	

SAMPLE CONTAINER SPECIFICATION				SAMPLE PRESERVATION					
SAMPLE ID CODE	# CONTAINERS	MATERIAL CODE	VOLUME	PRESERVATIVE USED	TOTAL VOL ADDED IN FIELD (mL)	FINAL pH	INTENDED ANALYSIS AND/OR METHOD	SAMPLING EQUIPMENT CODE	SAMPLE PUMP FLOW RATE (mL per minute)
MW0040	2	CG	40 mL	HCl	–	–	8260	APP	~200

REMARKS: 1022

MATERIAL CODES: **AG** = Amber Glass; **CG** = Clear Glass; **PE** = Polyethylene; **PP** = Polypropylene; **S** = Silicone; **T** = Teflon; **O** = Other (Specify)

SAMPLING EQUIPMENT CODES: **APP** = After Peristaltic Pump; **B** = Bailer; **BP** = Bladder Pump; **ESP** = ~~Electric~~ Submersible Pump; **RFPP** = Reverse Flow Peristaltic Pump; **SM** = Straw Method (Tubing Gravity Drain); **O** = Other (Specify)

NOTES: 1. **The above do not constitute all of the information required by Chapter 62-160, F.A.C.**

2. STABILIZATION CRITERIA FOR RANGE OF VARIATION OF LAST THREE CONSECUTIVE READINGS (SEE FS 2212, SECTION 3)

pH: ± 0.2 units **Temperature:** ± 0.2 °C **Specific Conductance:** ± 5% **Dissolved Oxygen:** all readings ≤ 20% saturation (see Table FS 2200-2); optionally, ± 0.2 mg/L or ± 10% (whichever is greater) **Turbidity:** all readings ≤ 20 NTU; optionally ± 5 NTU or ± 10% (whichever is greater)

Revision Date: March 9, 2014

October 15, 2015 Service Request No:J1507821

Mr. Scott Starr
Levine Fricke
14025 Riveredge Drive
Suite 600
Tampa, FL 33637

Laboratory Results for: NASA M505

Dear Mr.Starr,

Enclosed are the results of the sample(s) submitted to our laboratory September 30, 2015
For your reference, these analyses have been assigned our service request number **J1507821.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. In accordance to the NELAC 2003 Standard, a statement on the estimated uncertainty of measurement of any quantitative analysis will be supplied upon request.

Please contact me if you have any questions. My extension is 4409. You may also contact me via email at Craig.Myers@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Craig Myers
Project Manager

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ALS Group USA, Corp.
dba ALS Environmental

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0013IS-025.5-20150928 **Lab ID: J1507821-001**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	1178				uMHOS/c	120.1
pH, Field	6.78				pH Units	150.1
Temperature, Field	29.97				deg C	170.1
Turbidity, Field	3.29				NTU	180.1
cis-1,2-Dichloroethene	6.3		0.36	1.0	ug/L	8260B
m,p-Xylenes	0.40	I	0.31	2.0	ug/L	8260B
Tetrachloroethene (PCE)	0.65	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.44	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	20		0.36	1.0	ug/L	8260B
Depth	6.67				Feet	Depth Field
Dissolved Oxygen, Field	1.25		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0039-032.5-20150928 **Lab ID: J1507821-002**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	3321				uMHOS/c	120.1
pH, Field	6.56				pH Units	150.1
Temperature, Field	30.14				deg C	170.1
Turbidity, Field	6.29				NTU	180.1
cis-1,2-Dichloroethene	5.3		0.36	1.0	ug/L	8260B
m,p-Xylenes	0.31	I	0.31	2.0	ug/L	8260B
Tetrachloroethene (PCE)	0.57	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.78	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	6.1		0.36	1.0	ug/L	8260B
Depth	5.40				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0044-027.5-20150928 **Lab ID: J1507821-003**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	3289				uMHOS/c	120.1
pH, Field	6.52				pH Units	150.1
Temperature, Field	29.48				deg C	170.1
Turbidity, Field	8.13				NTU	180.1
cis-1,2-Dichloroethene	1.6		0.36	1.0	ug/L	8260B
m,p-Xylenes	0.33	I	0.31	2.0	ug/L	8260B
Tetrachloroethene (PCE)	0.60	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.30	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	1.4		0.36	1.0	ug/L	8260B
Depth	5.24				Feet	Depth Field
Dissolved Oxygen, Field	0.25		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0041-025.0-20150928 **Lab ID: J1507821-004**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	1826				uMHOS/c	120.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0041-025.0-20150928	Lab ID: J1507821-004					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
pH, Field	6.56				pH Units	150.1
Temperature, Field	29.16				deg C	170.1
Turbidity, Field	9.64				NTU	180.1
cis-1,2-Dichloroethene	7.9		0.36	1.0	ug/L	8260B
m,p-Xylenes	0.31	I	0.31	2.0	ug/L	8260B
Tetrachloroethene (PCE)	0.50	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.40	I	0.19	1.0	ug/L	8260B
Depth	6.08				Feet	Depth Field
Dissolved Oxygen, Field	0.31		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0042-035.0-20150928	Lab ID: J1507821-005					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3454				uMHOS/c	120.1
pH, Field	6.47				pH Units	150.1
Temperature, Field	28.23				deg C	170.1
Turbidity, Field	6.24				NTU	180.1
cis-1,2-Dichloroethene	31		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.42	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.9		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	7.9		0.36	1.0	ug/L	8260B
Depth	6.10				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0023-025.0-20150928	Lab ID: J1507821-006					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2554				uMHOS/c	120.1
pH, Field	6.77				pH Units	150.1
Temperature, Field	27.21				deg C	170.1
Turbidity, Field	3.87				NTU	180.1
cis-1,2-Dichloroethene	3.8		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.36	I	0.22	1.0	ug/L	8260B
Depth	5.84				Feet	Depth Field
Dissolved Oxygen, Field	0.18		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0055-025.0-20150928	Lab ID: J1507821-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3337				uMHOS/c	120.1
pH, Field	6.98				pH Units	150.1
Temperature, Field	26.9				deg C	170.1
Turbidity, Field	5.15				NTU	180.1
Tetrachloroethene (PCE)	0.32	I	0.22	1.0	ug/L	8260B
Depth	7.05				Feet	Depth Field
Dissolved Oxygen, Field	0.12		0.10	0.10	mg/L	SM 4500-O

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0055-025.0-20150928	Lab ID: J1507821-007					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**

CLIENT ID: M505-MW0053-010.0-20150928	Lab ID: J1507821-008					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2434				uMHOS/c	120.1
pH, Field	7.17				pH Units	150.1
Temperature, Field	27.9				deg C	170.1
Turbidity, Field	2.2				NTU	180.1
Methylene Chloride	0.28	I	0.21	5.0	ug/L	8260B
Tetrachloroethene (PCE)	0.33	I	0.22	1.0	ug/L	8260B
Depth	5.93				Feet	Depth Field
Dissolved Oxygen, Field	0.28		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0052-010.0-20150928	Lab ID: J1507821-009					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	224				uMHOS/c	120.1
pH, Field	5.08				pH Units	150.1
Temperature, Field	28.0				deg C	170.1
Turbidity, Field	16.6				NTU	180.1
cis-1,2-Dichloroethene	3.8		0.36	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.21	I	0.19	1.0	ug/L	8260B
Depth	7.18				Feet	Depth Field
Dissolved Oxygen, Field	0.18		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0051-025.0-20150928	Lab ID: J1507821-010					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2671				uMHOS/c	120.1
pH, Field	6.90				pH Units	150.1
Temperature, Field	27.1				deg C	170.1
Turbidity, Field	2.3				NTU	180.1
cis-1,2-Dichloroethene	25		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.40	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.75	I	0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	2.2		0.36	1.0	ug/L	8260B
Vinyl Chloride	8.3		0.36	1.0	ug/L	8260B
Depth	7.44				Feet	Depth Field

CLIENT ID: M505-MW0033-025.0-20150928	Lab ID: J1507821-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2633				uMHOS/c	120.1
pH, Field	6.73				pH Units	150.1
Temperature, Field	27.2				deg C	170.1
Turbidity, Field	1.7				NTU	180.1
cis-1,2-Dichloroethene	55		0.36	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0033-025.0-20150928	Lab ID: J1507821-011					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Tetrachloroethene (PCE)	0.23	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.3		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.97	I	0.36	1.0	ug/L	8260B
Vinyl Chloride	11		0.36	1.0	ug/L	8260B
Depth	8.03				Feet	Depth Field
Dissolved Oxygen, Field	0.19		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0032-035.0-20150928	Lab ID: J1507821-012					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2615				uMHOS/c	120.1
pH, Field	6.94				pH Units	150.1
Temperature, Field	26.2				deg C	170.1
Turbidity, Field	0.74				NTU	180.1
cis-1,2-Dichloroethene	220		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.27	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.81	I	0.19	1.0	ug/L	8260B
Vinyl Chloride	35		0.36	1.0	ug/L	8260B
Depth	8.64				Feet	Depth Field
Dissolved Oxygen, Field	0.19		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0038-025.0-20150929	Lab ID: J1507821-013					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3526				uMHOS/c	120.1
pH, Field	6.45				pH Units	150.1
Temperature, Field	26.75				deg C	170.1
Turbidity, Field	5.18				NTU	180.1
cis-1,2-Dichloroethene	3.5		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.52	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.21	I	0.19	1.0	ug/L	8260B
Depth	5.94				Feet	Depth Field
Dissolved Oxygen, Field	0.31		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0020-036.0-20150929	Lab ID: J1507821-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3503				uMHOS/c	120.1
pH, Field	6.64				pH Units	150.1
Temperature, Field	27.07				deg C	170.1
Turbidity, Field	13.8				NTU	180.1
cis-1,2-Dichloroethene	120		0.36	1.0	ug/L	8260B
m,p-Xylenes	0.42	I	0.31	2.0	ug/L	8260B
Tetrachloroethene (PCE)	0.69	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	5.1		0.19	1.0	ug/L	8260B
Depth	6.07				Feet	Depth Field

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0020-036.0-20150929	Lab ID: J1507821-014					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dissolved Oxygen, Field	0.35		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0048-027.5-20150929	Lab ID: J1507821-015					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3096				uMHOS/c	120.1
pH, Field	6.56				pH Units	150.1
Temperature, Field	27.71				deg C	170.1
Turbidity, Field	6.29				NTU	180.1
cis-1,2-Dichloroethene	41		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.38	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.4		0.19	1.0	ug/L	8260B
Vinyl Chloride	0.40	I	0.36	1.0	ug/L	8260B
Depth	6.08				Feet	Depth Field
Dissolved Oxygen, Field	0.20		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0018-036.0-20150929	Lab ID: J1507821-016					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	3182				uMHOS/c	120.1
pH, Field	6.61				pH Units	150.1
Temperature, Field	27.05				deg C	170.1
Turbidity, Field	11.6				NTU	180.1
cis-1,2-Dichloroethene	19		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.28	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	0.82	I	0.19	1.0	ug/L	8260B
Depth	6.04				Feet	Depth Field
Dissolved Oxygen, Field	0.18		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0022-025.0-20150929	Lab ID: J1507821-017					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2532				uMHOS/c	120.1
pH, Field	6.69				pH Units	150.1
Temperature, Field	27.57				deg C	170.1
Turbidity, Field	1.14				NTU	180.1
cis-1,2-Dichloroethene	4.0		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.38	I	0.22	1.0	ug/L	8260B
Vinyl Chloride	7.3		0.36	1.0	ug/L	8260B
Depth	6.23				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0027-025.0-20150929	Lab ID: J1507821-018					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1264				uMHOS/c	120.1
pH, Field	6.75				pH Units	150.1

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0027-025.0-20150929 **Lab ID: J1507821-018**

Analyte	Results	Flag	MDL	PQL	Units	Method
Temperature, Field	27.34				deg C	170.1
Turbidity, Field	3.06				NTU	180.1
cis-1,2-Dichloroethene	0.52	I	0.36	1.0	ug/L	8260B
Methylene Chloride	0.26	I	0.21	5.0	ug/L	8260B
Tetrachloroethene (PCE)	0.38	I	0.22	1.0	ug/L	8260B
Vinyl Chloride	1.3		0.36	1.0	ug/L	8260B
Depth	6.75				Feet	Depth Field
Dissolved Oxygen, Field	0.17		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0028-025.0-20150929 **Lab ID: J1507821-019**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	1151				uMHOS/c	120.1
pH, Field	6.87				pH Units	150.1
Temperature, Field	26.43				deg C	170.1
Turbidity, Field	5.78				NTU	180.1
cis-1,2-Dichloroethene	3.3		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.25	I	0.22	1.0	ug/L	8260B
Vinyl Chloride	50		0.36	1.0	ug/L	8260B
Depth	2.42				Feet	Depth Field
Dissolved Oxygen, Field	0.18		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0025-025.0-20150929 **Lab ID: J1507821-020**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	3485				uMHOS/c	120.1
pH, Field	6.48				pH Units	150.1
Temperature, Field	24.6				deg C	170.1
Turbidity, Field	4.7				NTU	180.1
cis-1,2-Dichloroethene	270		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.35	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	8.4		0.19	1.0	ug/L	8260B
Vinyl Chloride	0.66	I	0.36	1.0	ug/L	8260B
Depth	7.76				Feet	Depth Field
Dissolved Oxygen, Field	0.23		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0035-025.0-20150929 **Lab ID: J1507821-021**

Analyte	Results	Flag	MDL	PQL	Units	Method
Conductivity, Field	2816				uMHOS/c	120.1
pH, Field	6.64				pH Units	150.1
Temperature, Field	24.8				deg C	170.1
Turbidity, Field	7.1				NTU	180.1
cis-1,2-Dichloroethene	71		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.39	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	1.4		0.19	1.0	ug/L	8260B

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0035-025.0-20150929	Lab ID: J1507821-021					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Trichloroethene (TCE)	3.9		0.36	1.0	ug/L	8260B
Depth	4.06				Feet	Depth Field
Dissolved Oxygen, Field	0.31		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0030-025.0-20150929	Lab ID: J1507821-022					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1617				uMHOS/c	120.1
pH, Field	7.17				pH Units	150.1
Temperature, Field	25.2				deg C	170.1
Turbidity, Field	4.4				NTU	180.1
cis-1,2-Dichloroethene	18		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.29	I	0.22	1.0	ug/L	8260B
Depth	7.08				Feet	Depth Field
Dissolved Oxygen, Field	0.21		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0021-025.0-20150929	Lab ID: J1507821-023					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	787				uMHOS/c	120.1
pH, Field	7.18				pH Units	150.1
Temperature, Field	26.5				deg C	170.1
Turbidity, Field	2.1				NTU	180.1
Depth	2.95				Feet	Depth Field
Dissolved Oxygen, Field	0.26		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0057-025.0-20150929	Lab ID: J1507821-024					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1212				uMHOS/c	120.1
pH, Field	6.71				pH Units	150.1
Temperature, Field	26.8				deg C	170.1
Turbidity, Field	0.93				NTU	180.1
Tetrachloroethene (PCE)	0.24	I	0.22	1.0	ug/L	8260B
Vinyl Chloride	58		0.36	1.0	ug/L	8260B
Depth	3.86				Feet	Depth Field
Dissolved Oxygen, Field	0.24		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0059-025.0-20150929	Lab ID: J1507821-025					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	1163				uMHOS/c	120.1
pH, Field	6.60				pH Units	150.1
Temperature, Field	26.9				deg C	170.1
Turbidity, Field	1.1				NTU	180.1
Vinyl Chloride	27		0.36	1.0	ug/L	8260B
Depth	3.69				Feet	Depth Field

SAMPLE DETECTION SUMMARY

CLIENT ID: M505-MW0059-025.0-20150929	Lab ID: J1507821-025					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Dissolved Oxygen, Field	0.23		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: M505-MW0049-027.5-20150929	Lab ID: J1507821-026					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Conductivity, Field	2673				uMHOS/c	120.1
pH, Field	6.62				pH Units	150.1
Temperature, Field	24.9				deg C	170.1
Turbidity, Field	2.1				NTU	180.1
cis-1,2-Dichloroethene	140		0.36	1.0	ug/L	8260B
Tetrachloroethene (PCE)	0.37	I	0.22	1.0	ug/L	8260B
trans-1,2-Dichloroethene	2.1		0.19	1.0	ug/L	8260B
Trichloroethene (TCE)	0.39	I	0.36	1.0	ug/L	8260B
Depth	8.17				Feet	Depth Field
Dissolved Oxygen, Field	0.27		0.10	0.10	mg/L	SM 4500-O

CLIENT ID: Trip Blank	Lab ID: J1507821-027					
Analyte	**Results**	**Flag**	**MDL**	**PQL**	**Units**	**Method**
Methylene Chloride	0.28	I	0.21	5.0	ug/L	8260B

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State Certifications, Accreditations, and Licenses

Agency	Number	Expire Date
Department of Defense	66206	9/20/2016
Florida Department of Health	E82502	6/30/2016
Georgia Department of Natural Resources	958	6/30/2016
Kentucky Division of Waste Management	63	6/30/2016
Louisiana Department of Environmental Quality	02086	6/30/2016
Maine Department of Health and Human Services	2015002	2/3/2017
North Carolina Department of Environment and Natural Resources	527	12/31/2015
Pennsylvania Department of Environmental Protection	68-04835	8/31/2016
South Carolina Department of Health and Environmental Control	96021001	6/30/2016
Texas Commision on Environmental Quality	T104704197-13-5	5/31/2016
Virginia Environmental Accreditation Program	460191	12/14/2015

Data Qualifiers

Florida-DEP

!	Data deviates from historically established concentration ranges
*	Not reported due to interference
?	Data is rejected and should not be used
A	Value reported is the arithmetic mean of two or more determininations
B	Results based upon colony counts outside the acceptable range.
D	Measurement was made in the field.
E	Extra samples were taken at composite stations
H	Value based on field kit determination; results may not be accurate.
I	The reported value is between the laboratory method detection limit and the laboratory PQL.
J	Estimated value.
K	Off scale low. The value is less than the lowest calibration standard.
L	Off scale high. The analyte is above the acceptable level of quantitation.
M	The MDL/MRL has been elevated because the analyte could not be accurately quantified.
N	Presumptive evidence of presence of material.
O	Sampled, but analysis lost or not performed
Q	Sample held beyond the acceptable holding time.
R	Significant rain in the past 48 hours (typically in excess of 0.5 inches)
T	Estimated value, less than the MDL
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected in both the sample and the associated method blank.
X	Insufficient individuals were present in the sample to achieve a minimum of 280 organisms for identification (Stream Condition Index Analysis only)
Y	The laboratory analysis was from an unpreserved or improperly preserved sample.
Z	Too many colonies were present, the numeric value represents the filtration volume

ALS Laboratory Group

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Client: Levine Fricke **Service Request:**J1507821

Project: NASA M505/TL014020.0000

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
J1507821-001	M505-MW0013IS-025.5-20150928	9/28/2015	1333
J1507821-002	M505-MW0039-032.5-20150928	9/28/2015	1420
J1507821-003	M505-MW0044-027.5-20150928	9/28/2015	1504
J1507821-004	M505-MW0041-025.0-20150928	9/28/2015	1545
J1507821-005	M505-MW0042-035.0-20150928	9/28/2015	1624
J1507821-006	M505-MW0023-025.0-20150928	9/28/2015	1707
J1507821-007	M505-MW0055-025.0-20150928	9/28/2015	1325
J1507821-008	M505-MW0053-010.0-20150928	9/28/2015	1406
J1507821-009	M505-MW0052-010.0-20150928	9/28/2015	1449
J1507821-010	M505-MW0051-025.0-20150928	9/28/2015	1532
J1507821-011	M505-MW0033-025.0-20150928	9/28/2015	1613
J1507821-012	M505-MW0032-035.0-20150928	9/28/2015	1648
J1507821-013	M505-MW0038-025.0-20150929	9/29/2015	1020
J1507821-014	M505-MW0020-036.0-20150929	9/29/2015	1100
J1507821-015	M505-MW0048-027.5-20150929	9/29/2015	1146
J1507821-016	M505-MW0018-036.0-20150929	9/29/2015	1240
J1507821-017	M505-MW0022-025.0-20150929	9/29/2015	1328
J1507821-018	M505-MW0027-025.0-20150929	9/29/2015	1412
J1507821-019	M505-MW0028-025.0-20150929	9/29/2015	1454
J1507821-020	M505-MW0025-025.0-20150929	9/29/2015	1128
J1507821-021	M505-MW0035-025.0-20150929	9/29/2015	1013
J1507821-022	M505-MW0030-025.0-20150929	9/29/2015	1244
J1507821-023	M505-MW0021-025.0-20150929	9/29/2015	1329
J1507821-024	M505-MW0057-025.0-20150929	9/29/2015	1405
J1507821-025	M505-MW0059-025.0-20150929	9/29/2015	1444
J1507821-026	M505-MW0049-027.5-20150929	9/29/2015	1048
J1507821-027	Trip Blank	9/28/2015	0000

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 13:33
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0013IS-025.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 00:32	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 00:32	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 00:32	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 00:32	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 00:32	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 00:32	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 00:32	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 00:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 00:32	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 00:32	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 00:32	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 00:32	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 00:32	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 00:32	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:32	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 00:32	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 00:32	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 00:32	
Acetone	5.6	U	50	5.6	1	10/06/15 00:32	
Benzene	0.21	U	1.0	0.21	1	10/06/15 00:32	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 00:32	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 00:32	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 00:32	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 00:32	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 00:32	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 00:32	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:32	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 00:32	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 00:32	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 00:32	
cis-1,2-Dichloroethene	**6.3**		1.0	0.36	1	10/06/15 00:32	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 00:32	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 00:32	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 00:32	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 00:32	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 00:32	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 00:32	
m,p-Xylenes	**0.40**	**I**	2.0	0.31	1	10/06/15 00:32	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 00:32	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 00:32	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 00:32	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 00:32	
Styrene	0.29	U	1.0	0.29	1	10/06/15 00:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 13:33
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0013IS-025.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-001	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.65**	**I**	1.0	0.22	1	10/06/15 00:32	
Toluene	0.19	U	1.0	0.19	1	10/06/15 00:32	
trans-1,2-Dichloroethene	**0.44**	**I**	1.0	0.19	1	10/06/15 00:32	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 00:32	
Trichloroethene (TCE)	**20**		1.0	0.36	1	10/06/15 00:32	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 00:32	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 00:32	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 00:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 00:32	
4-Bromofluorobenzene	98	86 - 113	10/06/15 00:32	
Dibromofluoromethane	103	86 - 112	10/06/15 00:32	
Toluene-d8	100	88 - 115	10/06/15 00:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:20
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0039-032.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 00:56	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 00:56	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 00:56	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 00:56	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 00:56	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 00:56	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 00:56	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 00:56	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 00:56	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 00:56	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 00:56	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 00:56	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 00:56	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 00:56	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:56	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 00:56	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 00:56	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 00:56	
Acetone	5.6	U	50	5.6	1	10/06/15 00:56	
Benzene	0.21	U	1.0	0.21	1	10/06/15 00:56	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 00:56	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 00:56	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 00:56	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 00:56	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 00:56	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 00:56	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:56	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 00:56	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 00:56	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 00:56	
cis-1,2-Dichloroethene	**5.3**		1.0	0.36	1	10/06/15 00:56	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 00:56	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 00:56	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 00:56	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 00:56	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 00:56	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 00:56	
m,p-Xylenes	**0.31**	**I**	2.0	0.31	1	10/06/15 00:56	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 00:56	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 00:56	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 00:56	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 00:56	
Styrene	0.29	U	1.0	0.29	1	10/06/15 00:56	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:20
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0039-032.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-002	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.57**	**I**	1.0	0.22	1	10/06/15 00:56	
Toluene	0.19	U	1.0	0.19	1	10/06/15 00:56	
trans-1,2-Dichloroethene	**0.78**	**I**	1.0	0.19	1	10/06/15 00:56	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 00:56	
Trichloroethene (TCE)	**6.1**		1.0	0.36	1	10/06/15 00:56	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 00:56	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 00:56	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 00:56	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	72 - 121	10/06/15 00:56	
4-Bromofluorobenzene	99	86 - 113	10/06/15 00:56	
Dibromofluoromethane	101	86 - 112	10/06/15 00:56	
Toluene-d8	101	88 - 115	10/06/15 00:56	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:04
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0044-027.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 01:19	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 01:19	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 01:19	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 01:19	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 01:19	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 01:19	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 01:19	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 01:19	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 01:19	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 01:19	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 01:19	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 01:19	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 01:19	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 01:19	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 01:19	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 01:19	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 01:19	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 01:19	
Acetone	5.6	U	50	5.6	1	10/06/15 01:19	
Benzene	0.21	U	1.0	0.21	1	10/06/15 01:19	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 01:19	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 01:19	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 01:19	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 01:19	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 01:19	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 01:19	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 01:19	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 01:19	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 01:19	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 01:19	
cis-1,2-Dichloroethene	**1.6**		1.0	0.36	1	10/06/15 01:19	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 01:19	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 01:19	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 01:19	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 01:19	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 01:19	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 01:19	
m,p-Xylenes	**0.33**	**I**	2.0	0.31	1	10/06/15 01:19	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 01:19	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 01:19	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 01:19	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 01:19	
Styrene	0.29	U	1.0	0.29	1	10/06/15 01:19	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:04
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0044-027.5-20150928	**Units:**	ug/L
Lab Code:	J1507821-003	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.60**	**I**	1.0	0.22	1	10/06/15 01:19	
Toluene	0.19	U	1.0	0.19	1	10/06/15 01:19	
trans-1,2-Dichloroethene	**0.30**	**I**	1.0	0.19	1	10/06/15 01:19	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 01:19	
Trichloroethene (TCE)	**1.4**		1.0	0.36	1	10/06/15 01:19	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 01:19	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 01:19	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 01:19	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 01:19	
4-Bromofluorobenzene	98	86 - 113	10/06/15 01:19	
Dibromofluoromethane	101	86 - 112	10/06/15 01:19	
Toluene-d8	99	88 - 115	10/06/15 01:19	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:45
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0041-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 01:43	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 01:43	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 01:43	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 01:43	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 01:43	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 01:43	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 01:43	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 01:43	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 01:43	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 01:43	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 01:43	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 01:43	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 01:43	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 01:43	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 01:43	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 01:43	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 01:43	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 01:43	
Acetone	5.6	U	50	5.6	1	10/06/15 01:43	
Benzene	0.21	U	1.0	0.21	1	10/06/15 01:43	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 01:43	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 01:43	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 01:43	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 01:43	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 01:43	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 01:43	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 01:43	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 01:43	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 01:43	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 01:43	
cis-1,2-Dichloroethene	**7.9**		1.0	0.36	1	10/06/15 01:43	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 01:43	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 01:43	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 01:43	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 01:43	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 01:43	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 01:43	
m,p-Xylenes	**0.31**	**I**	2.0	0.31	1	10/06/15 01:43	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 01:43	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 01:43	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 01:43	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 01:43	
Styrene	0.29	U	1.0	0.29	1	10/06/15 01:43	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:45
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0041-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-004	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.50**	**I**	1.0	0.22	1	10/06/15 01:43	
Toluene	0.19	U	1.0	0.19	1	10/06/15 01:43	
trans-1,2-Dichloroethene	**0.40**	**I**	1.0	0.19	1	10/06/15 01:43	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 01:43	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 01:43	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 01:43	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 01:43	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 01:43	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 01:43	
4-Bromofluorobenzene	100	86 - 113	10/06/15 01:43	
Dibromofluoromethane	102	86 - 112	10/06/15 01:43	
Toluene-d8	101	88 - 115	10/06/15 01:43	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:24
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0042-035.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 02:07	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 02:07	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 02:07	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 02:07	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 02:07	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 02:07	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 02:07	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 02:07	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 02:07	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 02:07	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 02:07	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 02:07	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 02:07	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 02:07	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:07	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 02:07	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 02:07	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 02:07	
Acetone	5.6 U	50	5.6	1	10/06/15 02:07	
Benzene	0.21 U	1.0	0.21	1	10/06/15 02:07	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 02:07	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 02:07	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 02:07	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 02:07	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 02:07	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 02:07	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:07	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 02:07	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 02:07	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 02:07	
cis-1,2-Dichloroethene	**31**	1.0	0.36	1	10/06/15 02:07	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 02:07	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 02:07	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 02:07	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 02:07	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 02:07	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 02:07	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 02:07	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 02:07	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 02:07	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 02:07	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 02:07	
Styrene	0.29 U	1.0	0.29	1	10/06/15 02:07	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:24
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0042-035.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-005	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.42**	**I**	1.0	0.22	1	10/06/15 02:07	
Toluene	0.19	U	1.0	0.19	1	10/06/15 02:07	
trans-1,2-Dichloroethene	**1.9**		1.0	0.19	1	10/06/15 02:07	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 02:07	
Trichloroethene (TCE)	**7.9**		1.0	0.36	1	10/06/15 02:07	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 02:07	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 02:07	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 02:07	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 02:07	
4-Bromofluorobenzene	98	86 - 113	10/06/15 02:07	
Dibromofluoromethane	102	86 - 112	10/06/15 02:07	
Toluene-d8	101	88 - 115	10/06/15 02:07	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 17:07
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0023-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 02:32	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 02:32	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 02:32	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 02:32	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 02:32	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 02:32	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 02:32	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 02:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 02:32	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 02:32	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 02:32	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 02:32	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 02:32	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 02:32	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:32	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 02:32	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 02:32	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 02:32	
Acetone	5.6 U	50	5.6	1	10/06/15 02:32	
Benzene	0.21 U	1.0	0.21	1	10/06/15 02:32	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 02:32	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 02:32	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 02:32	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 02:32	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 02:32	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 02:32	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:32	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 02:32	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 02:32	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 02:32	
cis-1,2-Dichloroethene	**3.8**	1.0	0.36	1	10/06/15 02:32	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 02:32	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 02:32	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 02:32	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 02:32	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 02:32	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 02:32	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 02:32	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 02:32	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 02:32	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 02:32	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 02:32	
Styrene	0.29 U	1.0	0.29	1	10/06/15 02:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 17:07
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0023-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-006	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.36**	**I**	1.0	0.22	1	10/06/15 02:32	
Toluene	0.19	U	1.0	0.19	1	10/06/15 02:32	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 02:32	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 02:32	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 02:32	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 02:32	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 02:32	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 02:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 02:32	
4-Bromofluorobenzene	100	86 - 113	10/06/15 02:32	
Dibromofluoromethane	100	86 - 112	10/06/15 02:32	
Toluene-d8	97	88 - 115	10/06/15 02:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 13:25
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0055-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 02:55	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 02:55	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 02:55	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 02:55	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 02:55	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 02:55	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 02:55	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 02:55	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 02:55	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 02:55	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 02:55	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 02:55	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 02:55	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 02:55	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:55	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 02:55	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 02:55	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 02:55	
Acetone	5.6 U	50	5.6	1	10/06/15 02:55	
Benzene	0.21 U	1.0	0.21	1	10/06/15 02:55	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 02:55	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 02:55	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 02:55	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 02:55	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 02:55	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 02:55	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 02:55	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 02:55	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 02:55	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 02:55	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	10/06/15 02:55	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 02:55	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 02:55	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 02:55	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 02:55	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 02:55	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 02:55	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 02:55	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 02:55	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 02:55	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 02:55	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 02:55	
Styrene	0.29 U	1.0	0.29	1	10/06/15 02:55	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 13:25
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0055-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-007	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.32**	**I**	1.0	0.22	1	10/06/15 02:55	
Toluene	0.19	U	1.0	0.19	1	10/06/15 02:55	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 02:55	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 02:55	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 02:55	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 02:55	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 02:55	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 02:55	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 02:55	
4-Bromofluorobenzene	98	86 - 113	10/06/15 02:55	
Dibromofluoromethane	101	86 - 112	10/06/15 02:55	
Toluene-d8	101	88 - 115	10/06/15 02:55	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:06
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0053-010.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 03:22	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 03:22	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 03:22	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 03:22	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 03:22	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 03:22	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 03:22	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 03:22	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 03:22	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 03:22	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 03:22	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 03:22	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 03:22	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 03:22	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 03:22	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 03:22	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 03:22	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 03:22	
Acetone	5.6	U	50	5.6	1	10/06/15 03:22	
Benzene	0.21	U	1.0	0.21	1	10/06/15 03:22	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 03:22	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 03:22	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 03:22	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 03:22	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 03:22	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 03:22	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 03:22	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 03:22	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 03:22	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 03:22	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	10/06/15 03:22	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 03:22	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 03:22	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 03:22	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 03:22	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 03:22	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 03:22	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 03:22	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 03:22	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 03:22	
Methylene Chloride	**0.28**	**I**	5.0	0.21	1	10/06/15 03:22	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 03:22	
Styrene	0.29	U	1.0	0.29	1	10/06/15 03:22	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:06
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0053-010.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-008	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.33**	**I**	1.0	0.22	1	10/06/15 03:22	
Toluene	0.19	U	1.0	0.19	1	10/06/15 03:22	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 03:22	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 03:22	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 03:22	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 03:22	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 03:22	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 03:22	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 03:22	
4-Bromofluorobenzene	101	86 - 113	10/06/15 03:22	
Dibromofluoromethane	105	86 - 112	10/06/15 03:22	
Toluene-d8	99	88 - 115	10/06/15 03:22	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:49
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0052-010.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 08:15	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 08:15	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 08:15	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 08:15	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 08:15	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 08:15	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 08:15	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 08:15	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 08:15	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 08:15	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 08:15	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 08:15	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 08:15	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 08:15	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 08:15	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 08:15	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 08:15	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 08:15	
Acetone	5.6 U	50	5.6	1	10/06/15 08:15	
Benzene	0.21 U	1.0	0.21	1	10/06/15 08:15	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 08:15	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 08:15	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 08:15	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 08:15	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 08:15	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 08:15	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 08:15	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 08:15	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 08:15	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 08:15	
cis-1,2-Dichloroethene	**3.8**	1.0	0.36	1	10/06/15 08:15	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 08:15	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 08:15	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 08:15	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 08:15	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 08:15	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 08:15	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 08:15	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 08:15	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 08:15	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 08:15	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 08:15	
Styrene	0.29 U	1.0	0.29	1	10/06/15 08:15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 14:49
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0052-010.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-009	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	10/06/15 08:15	
Toluene	0.19	U	1.0	0.19	1	10/06/15 08:15	
trans-1,2-Dichloroethene	**0.21**	**I**	1.0	0.19	1	10/06/15 08:15	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 08:15	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 08:15	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 08:15	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 08:15	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 08:15	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 08:15	
4-Bromofluorobenzene	100	86 - 113	10/06/15 08:15	
Dibromofluoromethane	101	86 - 112	10/06/15 08:15	
Toluene-d8	101	88 - 115	10/06/15 08:15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:32
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0051-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 03:46	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 03:46	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 03:46	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 03:46	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 03:46	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 03:46	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 03:46	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 03:46	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 03:46	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 03:46	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 03:46	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 03:46	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 03:46	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 03:46	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 03:46	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 03:46	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 03:46	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 03:46	
Acetone	5.6 U	50	5.6	1	10/06/15 03:46	
Benzene	0.21 U	1.0	0.21	1	10/06/15 03:46	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 03:46	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 03:46	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 03:46	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 03:46	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 03:46	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 03:46	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 03:46	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 03:46	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 03:46	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 03:46	
cis-1,2-Dichloroethene	**25**	1.0	0.36	1	10/06/15 03:46	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 03:46	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 03:46	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 03:46	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 03:46	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 03:46	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 03:46	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 03:46	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 03:46	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 03:46	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 03:46	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 03:46	
Styrene	0.29 U	1.0	0.29	1	10/06/15 03:46	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 15:32
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0051-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-010	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.40**	**I**	1.0	0.22	1	10/06/15 03:46	
Toluene	0.19	U	1.0	0.19	1	10/06/15 03:46	
trans-1,2-Dichloroethene	**0.75**	**I**	1.0	0.19	1	10/06/15 03:46	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 03:46	
Trichloroethene (TCE)	**2.2**		1.0	0.36	1	10/06/15 03:46	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 03:46	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 03:46	
Vinyl Chloride	**8.3**		1.0	0.36	1	10/06/15 03:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 03:46	
4-Bromofluorobenzene	98	86 - 113	10/06/15 03:46	
Dibromofluoromethane	102	86 - 112	10/06/15 03:46	
Toluene-d8	99	88 - 115	10/06/15 03:46	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:13
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0033-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 04:10	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 04:10	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 04:10	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 04:10	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 04:10	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 04:10	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 04:10	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 04:10	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 04:10	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 04:10	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 04:10	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 04:10	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 04:10	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 04:10	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 04:10	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 04:10	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 04:10	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 04:10	
Acetone	5.6 U	50	5.6	1	10/06/15 04:10	
Benzene	0.21 U	1.0	0.21	1	10/06/15 04:10	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 04:10	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 04:10	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 04:10	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 04:10	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 04:10	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 04:10	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 04:10	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 04:10	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 04:10	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 04:10	
cis-1,2-Dichloroethene	**55**	1.0	0.36	1	10/06/15 04:10	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 04:10	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 04:10	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 04:10	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 04:10	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 04:10	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 04:10	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 04:10	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 04:10	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 04:10	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 04:10	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 04:10	
Styrene	0.29 U	1.0	0.29	1	10/06/15 04:10	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:13
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0033-025.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-011	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.23**	**I**	1.0	0.22	1	10/06/15 04:10	
Toluene	0.19	U	1.0	0.19	1	10/06/15 04:10	
trans-1,2-Dichloroethene	**1.3**		1.0	0.19	1	10/06/15 04:10	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 04:10	
Trichloroethene (TCE)	**0.97**	**I**	1.0	0.36	1	10/06/15 04:10	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 04:10	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 04:10	
Vinyl Chloride	**11**		1.0	0.36	1	10/06/15 04:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 04:10	
4-Bromofluorobenzene	98	86 - 113	10/06/15 04:10	
Dibromofluoromethane	103	86 - 112	10/06/15 04:10	
Toluene-d8	98	88 - 115	10/06/15 04:10	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:48
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0032-035.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 04:34	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 04:34	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 04:34	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 04:34	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 04:34	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 04:34	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 04:34	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 04:34	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 04:34	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 04:34	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 04:34	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 04:34	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 04:34	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 04:34	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 04:34	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 04:34	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 04:34	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 04:34	
Acetone	5.6 U	50	5.6	1	10/06/15 04:34	
Benzene	0.21 U	1.0	0.21	1	10/06/15 04:34	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 04:34	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 04:34	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 04:34	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 04:34	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 04:34	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 04:34	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 04:34	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 04:34	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 04:34	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 04:34	
cis-1,2-Dichloroethene	**220**	1.0	0.36	1	10/06/15 04:34	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 04:34	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 04:34	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 04:34	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 04:34	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 04:34	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 04:34	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 04:34	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 04:34	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 04:34	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 04:34	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 04:34	
Styrene	0.29 U	1.0	0.29	1	10/06/15 04:34	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 16:48
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0032-035.0-20150928	**Units:**	ug/L
Lab Code:	J1507821-012	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.27**	**I**	1.0	0.22	1	10/06/15 04:34	
Toluene	0.19	U	1.0	0.19	1	10/06/15 04:34	
trans-1,2-Dichloroethene	**0.81**	**I**	1.0	0.19	1	10/06/15 04:34	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 04:34	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 04:34	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 04:34	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 04:34	
Vinyl Chloride	**35**		1.0	0.36	1	10/06/15 04:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 04:34	
4-Bromofluorobenzene	97	86 - 113	10/06/15 04:34	
Dibromofluoromethane	104	86 - 112	10/06/15 04:34	
Toluene-d8	99	88 - 115	10/06/15 04:34	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:20
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0038-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 05:00	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 05:00	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 05:00	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 05:00	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 05:00	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 05:00	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 05:00	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 05:00	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 05:00	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 05:00	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 05:00	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 05:00	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 05:00	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 05:00	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 05:00	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 05:00	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 05:00	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 05:00	
Acetone	5.6 U	50	5.6	1	10/06/15 05:00	
Benzene	0.21 U	1.0	0.21	1	10/06/15 05:00	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 05:00	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 05:00	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 05:00	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 05:00	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 05:00	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 05:00	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 05:00	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 05:00	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 05:00	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 05:00	
cis-1,2-Dichloroethene	**3.5**	1.0	0.36	1	10/06/15 05:00	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 05:00	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 05:00	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 05:00	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 05:00	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 05:00	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 05:00	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 05:00	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 05:00	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 05:00	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 05:00	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 05:00	
Styrene	0.29 U	1.0	0.29	1	10/06/15 05:00	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:20
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0038-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-013	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.52**	**I**	1.0	0.22	1	10/06/15 05:00	
Toluene	0.19	U	1.0	0.19	1	10/06/15 05:00	
trans-1,2-Dichloroethene	**0.21**	**I**	1.0	0.19	1	10/06/15 05:00	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 05:00	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 05:00	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 05:00	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 05:00	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 05:00	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	10/06/15 05:00	
4-Bromofluorobenzene	98	86 - 113	10/06/15 05:00	
Dibromofluoromethane	104	86 - 112	10/06/15 05:00	
Toluene-d8	99	88 - 115	10/06/15 05:00	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:00
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0020-036.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 05:24	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 05:24	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 05:24	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 05:24	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 05:24	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 05:24	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 05:24	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 05:24	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 05:24	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 05:24	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 05:24	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 05:24	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 05:24	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 05:24	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 05:24	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 05:24	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 05:24	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 05:24	
Acetone	5.6	U	50	5.6	1	10/06/15 05:24	
Benzene	0.21	U	1.0	0.21	1	10/06/15 05:24	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 05:24	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 05:24	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 05:24	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 05:24	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 05:24	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 05:24	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 05:24	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 05:24	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 05:24	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 05:24	
cis-1,2-Dichloroethene	**120**		1.0	0.36	1	10/06/15 05:24	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 05:24	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 05:24	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 05:24	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 05:24	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 05:24	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 05:24	
m,p-Xylenes	**0.42**	**I**	2.0	0.31	1	10/06/15 05:24	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 05:24	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 05:24	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 05:24	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 05:24	
Styrene	0.29	U	1.0	0.29	1	10/06/15 05:24	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:00
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0020-036.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-014	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.69**	**I**	1.0	0.22	1	10/06/15 05:24	
Toluene	0.19	U	1.0	0.19	1	10/06/15 05:24	
trans-1,2-Dichloroethene	**5.1**		1.0	0.19	1	10/06/15 05:24	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 05:24	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 05:24	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 05:24	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 05:24	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 05:24	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 05:24	
4-Bromofluorobenzene	98	86 - 113	10/06/15 05:24	
Dibromofluoromethane	100	86 - 112	10/06/15 05:24	
Toluene-d8	102	88 - 115	10/06/15 05:24	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:46
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0048-027.5-20150929	**Units:**	ug/L
Lab Code:	J1507821-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 05:47	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 05:47	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 05:47	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 05:47	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 05:47	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 05:47	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 05:47	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 05:47	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 05:47	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 05:47	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 05:47	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 05:47	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 05:47	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 05:47	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 05:47	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 05:47	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 05:47	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 05:47	
Acetone	5.6 U	50	5.6	1	10/06/15 05:47	
Benzene	0.21 U	1.0	0.21	1	10/06/15 05:47	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 05:47	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 05:47	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 05:47	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 05:47	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 05:47	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 05:47	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 05:47	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 05:47	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 05:47	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 05:47	
cis-1,2-Dichloroethene	**41**	1.0	0.36	1	10/06/15 05:47	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 05:47	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 05:47	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 05:47	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 05:47	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 05:47	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 05:47	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 05:47	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 05:47	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 05:47	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 05:47	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 05:47	
Styrene	0.29 U	1.0	0.29	1	10/06/15 05:47	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:46
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0048-027.5-20150929	**Units:**	ug/L
Lab Code:	J1507821-015	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.38**	**I**	1.0	0.22	1	10/06/15 05:47	
Toluene	0.19	U	1.0	0.19	1	10/06/15 05:47	
trans-1,2-Dichloroethene	**1.4**		1.0	0.19	1	10/06/15 05:47	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 05:47	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 05:47	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 05:47	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 05:47	
Vinyl Chloride	**0.40**	**I**	1.0	0.36	1	10/06/15 05:47	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 05:47	
4-Bromofluorobenzene	98	86 - 113	10/06/15 05:47	
Dibromofluoromethane	102	86 - 112	10/06/15 05:47	
Toluene-d8	99	88 - 115	10/06/15 05:47	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 12:40
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0018-036.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 06:13	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 06:13	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 06:13	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 06:13	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 06:13	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 06:13	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 06:13	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 06:13	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 06:13	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 06:13	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 06:13	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 06:13	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 06:13	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 06:13	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 06:13	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 06:13	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 06:13	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 06:13	
Acetone	5.6 U	50	5.6	1	10/06/15 06:13	
Benzene	0.21 U	1.0	0.21	1	10/06/15 06:13	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 06:13	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 06:13	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 06:13	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 06:13	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 06:13	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 06:13	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 06:13	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 06:13	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 06:13	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 06:13	
cis-1,2-Dichloroethene	**19**	1.0	0.36	1	10/06/15 06:13	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 06:13	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 06:13	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 06:13	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 06:13	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 06:13	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 06:13	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 06:13	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 06:13	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 06:13	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 06:13	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 06:13	
Styrene	0.29 U	1.0	0.29	1	10/06/15 06:13	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 12:40
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0018-036.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-016	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.28**	**I**	1.0	0.22	1	10/06/15 06:13	
Toluene	0.19	U	1.0	0.19	1	10/06/15 06:13	
trans-1,2-Dichloroethene	**0.82**	**I**	1.0	0.19	1	10/06/15 06:13	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 06:13	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 06:13	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 06:13	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 06:13	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 06:13	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	110	72 - 121	10/06/15 06:13	
4-Bromofluorobenzene	96	86 - 113	10/06/15 06:13	
Dibromofluoromethane	103	86 - 112	10/06/15 06:13	
Toluene-d8	100	88 - 115	10/06/15 06:13	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 13:28
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0022-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 06:37	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 06:37	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 06:37	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 06:37	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 06:37	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 06:37	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 06:37	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 06:37	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 06:37	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 06:37	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 06:37	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 06:37	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 06:37	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 06:37	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 06:37	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 06:37	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 06:37	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 06:37	
Acetone	5.6 U	50	5.6	1	10/06/15 06:37	
Benzene	0.21 U	1.0	0.21	1	10/06/15 06:37	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 06:37	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 06:37	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 06:37	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 06:37	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 06:37	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 06:37	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 06:37	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 06:37	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 06:37	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 06:37	
cis-1,2-Dichloroethene	**4.0**	1.0	0.36	1	10/06/15 06:37	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 06:37	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 06:37	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 06:37	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 06:37	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 06:37	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 06:37	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 06:37	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 06:37	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 06:37	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 06:37	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 06:37	
Styrene	0.29 U	1.0	0.29	1	10/06/15 06:37	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 13:28
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0022-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-017	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.38**	**I**	1.0	0.22	1	10/06/15 06:37	
Toluene	0.19	U	1.0	0.19	1	10/06/15 06:37	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 06:37	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 06:37	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 06:37	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 06:37	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 06:37	
Vinyl Chloride	**7.3**		1.0	0.36	1	10/06/15 06:37	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 06:37	
4-Bromofluorobenzene	98	86 - 113	10/06/15 06:37	
Dibromofluoromethane	100	86 - 112	10/06/15 06:37	
Toluene-d8	100	88 - 115	10/06/15 06:37	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:12
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0027-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 07:01	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 07:01	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 07:01	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 07:01	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 07:01	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 07:01	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 07:01	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 07:01	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 07:01	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 07:01	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 07:01	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 07:01	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 07:01	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 07:01	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:01	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 07:01	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 07:01	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 07:01	
Acetone	5.6	U	50	5.6	1	10/06/15 07:01	
Benzene	0.21	U	1.0	0.21	1	10/06/15 07:01	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 07:01	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 07:01	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 07:01	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 07:01	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 07:01	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 07:01	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:01	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 07:01	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 07:01	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 07:01	
cis-1,2-Dichloroethene	**0.52**	**I**	1.0	0.36	1	10/06/15 07:01	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 07:01	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 07:01	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 07:01	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 07:01	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 07:01	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 07:01	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 07:01	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 07:01	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 07:01	
Methylene Chloride	**0.26**	**I**	5.0	0.21	1	10/06/15 07:01	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 07:01	
Styrene	0.29	U	1.0	0.29	1	10/06/15 07:01	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:12
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0027-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-018	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.38**	**I**	1.0	0.22	1	10/06/15 07:01	
Toluene	0.19	U	1.0	0.19	1	10/06/15 07:01	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 07:01	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 07:01	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 07:01	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 07:01	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 07:01	
Vinyl Chloride	**1.3**		1.0	0.36	1	10/06/15 07:01	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 07:01	
4-Bromofluorobenzene	96	86 - 113	10/06/15 07:01	
Dibromofluoromethane	104	86 - 112	10/06/15 07:01	
Toluene-d8	101	88 - 115	10/06/15 07:01	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:54
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0028-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 07:27	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 07:27	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 07:27	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 07:27	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 07:27	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 07:27	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 07:27	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 07:27	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 07:27	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 07:27	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 07:27	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 07:27	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 07:27	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 07:27	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:27	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 07:27	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 07:27	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 07:27	
Acetone	5.6	U	50	5.6	1	10/06/15 07:27	
Benzene	0.21	U	1.0	0.21	1	10/06/15 07:27	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 07:27	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 07:27	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 07:27	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 07:27	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 07:27	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 07:27	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:27	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 07:27	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 07:27	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 07:27	
cis-1,2-Dichloroethene	**3.3**		1.0	0.36	1	10/06/15 07:27	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 07:27	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 07:27	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 07:27	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 07:27	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 07:27	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 07:27	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 07:27	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 07:27	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 07:27	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 07:27	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 07:27	
Styrene	0.29	U	1.0	0.29	1	10/06/15 07:27	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:54
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0028-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-019	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.25**	**I**	1.0	0.22	1	10/06/15 07:27	
Toluene	0.19	U	1.0	0.19	1	10/06/15 07:27	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 07:27	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 07:27	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 07:27	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 07:27	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 07:27	
Vinyl Chloride	**50**		1.0	0.36	1	10/06/15 07:27	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	109	72 - 121	10/06/15 07:27	
4-Bromofluorobenzene	98	86 - 113	10/06/15 07:27	
Dibromofluoromethane	102	86 - 112	10/06/15 07:27	
Toluene-d8	97	88 - 115	10/06/15 07:27	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:28
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0025-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 07:51	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 07:51	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 07:51	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 07:51	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 07:51	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 07:51	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 07:51	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 07:51	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 07:51	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 07:51	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 07:51	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 07:51	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 07:51	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 07:51	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:51	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 07:51	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 07:51	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 07:51	
Acetone	5.6	U	50	5.6	1	10/06/15 07:51	
Benzene	0.21	U	1.0	0.21	1	10/06/15 07:51	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 07:51	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 07:51	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 07:51	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 07:51	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 07:51	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 07:51	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 07:51	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 07:51	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 07:51	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 07:51	
cis-1,2-Dichloroethene	**270**		1.0	0.36	1	10/06/15 07:51	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 07:51	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 07:51	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 07:51	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 07:51	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 07:51	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 07:51	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 07:51	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 07:51	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 07:51	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 07:51	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 07:51	
Styrene	0.29	U	1.0	0.29	1	10/06/15 07:51	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 11:28
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0025-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-020	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.35**	**I**	1.0	0.22	1	10/06/15 07:51	
Toluene	0.19	U	1.0	0.19	1	10/06/15 07:51	
trans-1,2-Dichloroethene	**8.4**		1.0	0.19	1	10/06/15 07:51	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 07:51	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 07:51	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 07:51	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 07:51	
Vinyl Chloride	**0.66**	**I**	1.0	0.36	1	10/06/15 07:51	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	108	72 - 121	10/06/15 07:51	
4-Bromofluorobenzene	97	86 - 113	10/06/15 07:51	
Dibromofluoromethane	103	86 - 112	10/06/15 07:51	
Toluene-d8	99	88 - 115	10/06/15 07:51	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:13
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0035-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 14:34	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 14:34	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 14:34	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 14:34	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 14:34	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 14:34	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 14:34	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 14:34	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 14:34	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 14:34	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 14:34	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 14:34	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 14:34	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 14:34	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 14:34	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 14:34	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 14:34	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 14:34	
Acetone	5.6 U	50	5.6	1	10/06/15 14:34	
Benzene	0.21 U	1.0	0.21	1	10/06/15 14:34	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 14:34	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 14:34	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 14:34	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 14:34	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 14:34	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 14:34	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 14:34	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 14:34	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 14:34	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 14:34	
cis-1,2-Dichloroethene	**71**	1.0	0.36	1	10/06/15 14:34	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 14:34	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 14:34	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 14:34	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 14:34	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 14:34	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 14:34	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 14:34	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 14:34	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 14:34	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 14:34	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 14:34	
Styrene	0.29 U	1.0	0.29	1	10/06/15 14:34	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:13
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0035-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-021	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.39**	**I**	1.0	0.22	1	10/06/15 14:34	
Toluene	0.19	U	1.0	0.19	1	10/06/15 14:34	
trans-1,2-Dichloroethene	**1.4**		1.0	0.19	1	10/06/15 14:34	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 14:34	
Trichloroethene (TCE)	**3.9**		1.0	0.36	1	10/06/15 14:34	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 14:34	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 14:34	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 14:34	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 14:34	
4-Bromofluorobenzene	96	86 - 113	10/06/15 14:34	
Dibromofluoromethane	101	86 - 112	10/06/15 14:34	
Toluene-d8	96	88 - 115	10/06/15 14:34	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 12:44
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0030-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 14:57	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 14:57	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 14:57	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 14:57	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 14:57	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 14:57	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 14:57	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 14:57	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 14:57	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 14:57	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 14:57	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 14:57	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 14:57	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 14:57	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 14:57	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 14:57	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 14:57	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 14:57	
Acetone	5.6 U	50	5.6	1	10/06/15 14:57	
Benzene	0.21 U	1.0	0.21	1	10/06/15 14:57	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 14:57	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 14:57	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 14:57	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 14:57	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 14:57	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 14:57	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 14:57	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 14:57	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 14:57	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 14:57	
cis-1,2-Dichloroethene	**18**	1.0	0.36	1	10/06/15 14:57	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 14:57	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 14:57	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 14:57	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 14:57	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 14:57	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 14:57	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 14:57	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 14:57	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 14:57	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 14:57	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 14:57	
Styrene	0.29 U	1.0	0.29	1	10/06/15 14:57	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 12:44
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0030-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-022	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.29**	**I**	1.0	0.22	1	10/06/15 14:57	
Toluene	0.19	U	1.0	0.19	1	10/06/15 14:57	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 14:57	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 14:57	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 14:57	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 14:57	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 14:57	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 14:57	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 14:57	
4-Bromofluorobenzene	97	86 - 113	10/06/15 14:57	
Dibromofluoromethane	100	86 - 112	10/06/15 14:57	
Toluene-d8	96	88 - 115	10/06/15 14:57	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 13:29
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0021-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 15:21	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 15:21	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 15:21	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 15:21	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 15:21	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 15:21	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 15:21	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 15:21	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 15:21	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 15:21	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 15:21	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 15:21	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 15:21	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 15:21	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 15:21	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 15:21	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 15:21	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 15:21	
Acetone	5.6 U	50	5.6	1	10/06/15 15:21	
Benzene	0.21 U	1.0	0.21	1	10/06/15 15:21	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 15:21	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 15:21	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 15:21	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 15:21	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 15:21	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 15:21	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 15:21	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 15:21	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 15:21	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 15:21	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	10/06/15 15:21	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 15:21	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 15:21	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 15:21	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 15:21	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 15:21	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 15:21	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 15:21	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 15:21	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 15:21	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 15:21	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 15:21	
Styrene	0.29 U	1.0	0.29	1	10/06/15 15:21	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 13:29
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0021-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-023	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/06/15 15:21	
Toluene	0.19 U	1.0	0.19	1	10/06/15 15:21	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	10/06/15 15:21	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/06/15 15:21	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/06/15 15:21	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/06/15 15:21	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	10/06/15 15:21	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/06/15 15:21	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 15:21	
4-Bromofluorobenzene	98	86 - 113	10/06/15 15:21	
Dibromofluoromethane	99	86 - 112	10/06/15 15:21	
Toluene-d8	98	88 - 115	10/06/15 15:21	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:05
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0057-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 15:45	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 15:45	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 15:45	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 15:45	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 15:45	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 15:45	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 15:45	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 15:45	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 15:45	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 15:45	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 15:45	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 15:45	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 15:45	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 15:45	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 15:45	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 15:45	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 15:45	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 15:45	
Acetone	5.6 U	50	5.6	1	10/06/15 15:45	
Benzene	0.21 U	1.0	0.21	1	10/06/15 15:45	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 15:45	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 15:45	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 15:45	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 15:45	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 15:45	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 15:45	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 15:45	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 15:45	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 15:45	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 15:45	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	10/06/15 15:45	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 15:45	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 15:45	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 15:45	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 15:45	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 15:45	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 15:45	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 15:45	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 15:45	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 15:45	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 15:45	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 15:45	
Styrene	0.29 U	1.0	0.29	1	10/06/15 15:45	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:05
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0057-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-024	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.24**	**I**	1.0	0.22	1	10/06/15 15:45	
Toluene	0.19	U	1.0	0.19	1	10/06/15 15:45	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 15:45	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 15:45	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 15:45	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 15:45	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 15:45	
Vinyl Chloride	**58**		1.0	0.36	1	10/06/15 15:45	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	106	72 - 121	10/06/15 15:45	
4-Bromofluorobenzene	96	86 - 113	10/06/15 15:45	
Dibromofluoromethane	103	86 - 112	10/06/15 15:45	
Toluene-d8	97	88 - 115	10/06/15 15:45	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:44
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0059-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 16:09	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 16:09	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 16:09	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 16:09	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 16:09	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 16:09	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 16:09	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 16:09	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 16:09	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 16:09	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 16:09	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 16:09	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 16:09	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 16:09	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 16:09	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 16:09	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 16:09	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 16:09	
Acetone	5.6 U	50	5.6	1	10/06/15 16:09	
Benzene	0.21 U	1.0	0.21	1	10/06/15 16:09	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 16:09	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 16:09	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 16:09	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 16:09	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 16:09	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 16:09	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 16:09	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 16:09	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 16:09	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 16:09	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	10/06/15 16:09	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 16:09	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 16:09	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 16:09	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 16:09	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 16:09	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 16:09	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 16:09	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 16:09	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 16:09	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 16:09	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 16:09	
Styrene	0.29 U	1.0	0.29	1	10/06/15 16:09	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 14:44
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0059-025.0-20150929	**Units:**	ug/L
Lab Code:	J1507821-025	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22	U	1.0	0.22	1	10/06/15 16:09	
Toluene	0.19	U	1.0	0.19	1	10/06/15 16:09	
trans-1,2-Dichloroethene	0.19	U	1.0	0.19	1	10/06/15 16:09	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 16:09	
Trichloroethene (TCE)	0.36	U	1.0	0.36	1	10/06/15 16:09	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 16:09	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 16:09	
Vinyl Chloride	**27**		1.0	0.36	1	10/06/15 16:09	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	10/06/15 16:09	
4-Bromofluorobenzene	97	86 - 113	10/06/15 16:09	
Dibromofluoromethane	100	86 - 112	10/06/15 16:09	
Toluene-d8	98	88 - 115	10/06/15 16:09	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:48
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0049-027.5-20150929	**Units:**	ug/L
Lab Code:	J1507821-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 16:32	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 16:32	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 16:32	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 16:32	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 16:32	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 16:32	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 16:32	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 16:32	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 16:32	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 16:32	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 16:32	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 16:32	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 16:32	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 16:32	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 16:32	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 16:32	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 16:32	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 16:32	
Acetone	5.6 U	50	5.6	1	10/06/15 16:32	
Benzene	0.21 U	1.0	0.21	1	10/06/15 16:32	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 16:32	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 16:32	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 16:32	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 16:32	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 16:32	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 16:32	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 16:32	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 16:32	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 16:32	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 16:32	
cis-1,2-Dichloroethene	**140**	1.0	0.36	1	10/06/15 16:32	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 16:32	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 16:32	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 16:32	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 16:32	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 16:32	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 16:32	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 16:32	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 16:32	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 16:32	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 16:32	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 16:32	
Styrene	0.29 U	1.0	0.29	1	10/06/15 16:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/29/15 10:48
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	M505-MW0049-027.5-20150929	**Units:**	ug/L
Lab Code:	J1507821-026	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	**0.37**	**I**	1.0	0.22	1	10/06/15 16:32	
Toluene	0.19	U	1.0	0.19	1	10/06/15 16:32	
trans-1,2-Dichloroethene	**2.1**		1.0	0.19	1	10/06/15 16:32	
trans-1,3-Dichloropropene	0.23	U	1.0	0.23	1	10/06/15 16:32	
Trichloroethene (TCE)	**0.39**	**I**	1.0	0.36	1	10/06/15 16:32	
Trichlorofluoromethane	0.24	U	20	0.24	1	10/06/15 16:32	
Trichlorotrifluoroethane	0.28	U	20	0.28	1	10/06/15 16:32	
Vinyl Chloride	0.36	U	1.0	0.36	1	10/06/15 16:32	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	107	72 - 121	10/06/15 16:32	
4-Bromofluorobenzene	97	86 - 113	10/06/15 16:32	
Dibromofluoromethane	101	86 - 112	10/06/15 16:32	
Toluene-d8	99	88 - 115	10/06/15 16:32	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 00:00
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1507821-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 14:10	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 14:10	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 14:10	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 14:10	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 14:10	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 14:10	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 14:10	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 14:10	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 14:10	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 14:10	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 14:10	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 14:10	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 14:10	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 14:10	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 14:10	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 14:10	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 14:10	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 14:10	
Acetone	5.6	U	50	5.6	1	10/06/15 14:10	
Benzene	0.21	U	1.0	0.21	1	10/06/15 14:10	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 14:10	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 14:10	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 14:10	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 14:10	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 14:10	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 14:10	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 14:10	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 14:10	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 14:10	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 14:10	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	10/06/15 14:10	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 14:10	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 14:10	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 14:10	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 14:10	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 14:10	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 14:10	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 14:10	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 14:10	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 14:10	
Methylene Chloride	**0.28**	**I**	5.0	0.21	1	10/06/15 14:10	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 14:10	
Styrene	0.29	U	1.0	0.29	1	10/06/15 14:10	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/28/15 00:00
Sample Matrix:	Water	**Date Received:**	09/30/15 09:50
Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	J1507821-027	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/06/15 14:10	
Toluene	0.19 U	1.0	0.19	1	10/06/15 14:10	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	10/06/15 14:10	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/06/15 14:10	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/06/15 14:10	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/06/15 14:10	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	10/06/15 14:10	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/06/15 14:10	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	103	72 - 121	10/06/15 14:10	
4-Bromofluorobenzene	96	86 - 113	10/06/15 14:10	
Dibromofluoromethane	101	86 - 112	10/06/15 14:10	
Toluene-d8	98	88 - 115	10/06/15 14:10	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1507532-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result		PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19	U	1.0	0.19	1	10/06/15 00:05	
1,1,1-Trichloroethane (TCA)	0.17	U	1.0	0.17	1	10/06/15 00:05	
1,1,2,2-Tetrachloroethane	0.29	U	1.0	0.29	1	10/06/15 00:05	
1,1,2-Trichloroethane	0.40	U	1.0	0.40	1	10/06/15 00:05	
1,1-Dichloroethane (1,1-DCA)	0.30	U	1.0	0.30	1	10/06/15 00:05	
1,1-Dichloroethene (1,1-DCE)	0.16	U	1.0	0.16	1	10/06/15 00:05	
1,2,3-Trichlorobenzene	0.33	U	10	0.33	1	10/06/15 00:05	
1,2,4-Trichlorobenzene	0.34	U	10	0.34	1	10/06/15 00:05	
1,2-Dibromo-3-chloropropane (DBCP)	2.3	U	5.0	2.3	1	10/06/15 00:05	
1,2-Dibromoethane (EDB)	0.46	U	1.0	0.46	1	10/06/15 00:05	
1,2-Dichlorobenzene	0.48	U	1.0	0.48	1	10/06/15 00:05	
1,2-Dichloroethane	0.22	U	1.0	0.22	1	10/06/15 00:05	
1,2-Dichloropropane	0.19	U	1.0	0.19	1	10/06/15 00:05	
1,3-Dichlorobenzene	0.22	U	1.0	0.22	1	10/06/15 00:05	
1,4-Dichlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:05	
2-Butanone (MEK)	3.8	U	10	3.8	1	10/06/15 00:05	
2-Hexanone	2.2	U	25	2.2	1	10/06/15 00:05	
4-Methyl-2-pentanone (MIBK)	1.1	U	25	1.1	1	10/06/15 00:05	
Acetone	5.6	U	50	5.6	1	10/06/15 00:05	
Benzene	0.21	U	1.0	0.21	1	10/06/15 00:05	
Bromochloromethane	0.27	U	5.0	0.27	1	10/06/15 00:05	
Bromodichloromethane	0.22	U	1.0	0.22	1	10/06/15 00:05	
Bromoform	0.42	U	2.0	0.42	1	10/06/15 00:05	
Bromomethane	0.23	U	5.0	0.23	1	10/06/15 00:05	
Carbon Disulfide	2.4	U	10	2.4	1	10/06/15 00:05	
Carbon Tetrachloride	0.34	U	1.0	0.34	1	10/06/15 00:05	
Chlorobenzene	0.16	U	1.0	0.16	1	10/06/15 00:05	
Chloroethane	0.52	U	5.0	0.52	1	10/06/15 00:05	
Chloroform	0.35	U	1.0	0.35	1	10/06/15 00:05	
Chloromethane	0.36	U	1.0	0.36	1	10/06/15 00:05	
cis-1,2-Dichloroethene	0.36	U	1.0	0.36	1	10/06/15 00:05	
cis-1,3-Dichloropropene	0.20	U	1.0	0.20	1	10/06/15 00:05	
Cyclohexane	0.24	U	10	0.24	1	10/06/15 00:05	
Dibromochloromethane	0.21	U	1.0	0.21	1	10/06/15 00:05	
Dichlorodifluoromethane	0.23	U	20	0.23	1	10/06/15 00:05	
Ethylbenzene	0.21	U	1.0	0.21	1	10/06/15 00:05	
Isopropylbenzene	0.14	U	1.0	0.14	1	10/06/15 00:05	
m,p-Xylenes	0.31	U	2.0	0.31	1	10/06/15 00:05	
Methyl Acetate	0.84	U	10	0.84	1	10/06/15 00:05	
Methyl tert-Butyl Ether	0.24	U	2.0	0.24	1	10/06/15 00:05	
Methylene Chloride	0.21	U	5.0	0.21	1	10/06/15 00:05	
o-Xylene	0.14	U	1.0	0.14	1	10/06/15 00:05	
Styrene	0.29	U	1.0	0.29	1	10/06/15 00:05	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1507532-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/06/15 00:05	
Toluene	0.19 U	1.0	0.19	1	10/06/15 00:05	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	10/06/15 00:05	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/06/15 00:05	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/06/15 00:05	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/06/15 00:05	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	10/06/15 00:05	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/06/15 00:05	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	104	72 - 121	10/06/15 00:05	
4-Bromofluorobenzene	95	86 - 113	10/06/15 00:05	
Dibromofluoromethane	101	86 - 112	10/06/15 00:05	
Toluene-d8	101	88 - 115	10/06/15 00:05	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1507607-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
1,1,1,2-Tetrachloroethane	0.19 U	1.0	0.19	1	10/06/15 13:46	
1,1,1-Trichloroethane (TCA)	0.17 U	1.0	0.17	1	10/06/15 13:46	
1,1,2,2-Tetrachloroethane	0.29 U	1.0	0.29	1	10/06/15 13:46	
1,1,2-Trichloroethane	0.40 U	1.0	0.40	1	10/06/15 13:46	
1,1-Dichloroethane (1,1-DCA)	0.30 U	1.0	0.30	1	10/06/15 13:46	
1,1-Dichloroethene (1,1-DCE)	0.16 U	1.0	0.16	1	10/06/15 13:46	
1,2,3-Trichlorobenzene	0.33 U	10	0.33	1	10/06/15 13:46	
1,2,4-Trichlorobenzene	0.34 U	10	0.34	1	10/06/15 13:46	
1,2-Dibromo-3-chloropropane (DBCP)	2.3 U	5.0	2.3	1	10/06/15 13:46	
1,2-Dibromoethane (EDB)	0.46 U	1.0	0.46	1	10/06/15 13:46	
1,2-Dichlorobenzene	0.48 U	1.0	0.48	1	10/06/15 13:46	
1,2-Dichloroethane	0.22 U	1.0	0.22	1	10/06/15 13:46	
1,2-Dichloropropane	0.19 U	1.0	0.19	1	10/06/15 13:46	
1,3-Dichlorobenzene	0.22 U	1.0	0.22	1	10/06/15 13:46	
1,4-Dichlorobenzene	0.16 U	1.0	0.16	1	10/06/15 13:46	
2-Butanone (MEK)	3.8 U	10	3.8	1	10/06/15 13:46	
2-Hexanone	2.2 U	25	2.2	1	10/06/15 13:46	
4-Methyl-2-pentanone (MIBK)	1.1 U	25	1.1	1	10/06/15 13:46	
Acetone	5.6 U	50	5.6	1	10/06/15 13:46	
Benzene	0.21 U	1.0	0.21	1	10/06/15 13:46	
Bromochloromethane	0.27 U	5.0	0.27	1	10/06/15 13:46	
Bromodichloromethane	0.22 U	1.0	0.22	1	10/06/15 13:46	
Bromoform	0.42 U	2.0	0.42	1	10/06/15 13:46	
Bromomethane	0.23 U	5.0	0.23	1	10/06/15 13:46	
Carbon Disulfide	2.4 U	10	2.4	1	10/06/15 13:46	
Carbon Tetrachloride	0.34 U	1.0	0.34	1	10/06/15 13:46	
Chlorobenzene	0.16 U	1.0	0.16	1	10/06/15 13:46	
Chloroethane	0.52 U	5.0	0.52	1	10/06/15 13:46	
Chloroform	0.35 U	1.0	0.35	1	10/06/15 13:46	
Chloromethane	0.36 U	1.0	0.36	1	10/06/15 13:46	
cis-1,2-Dichloroethene	0.36 U	1.0	0.36	1	10/06/15 13:46	
cis-1,3-Dichloropropene	0.20 U	1.0	0.20	1	10/06/15 13:46	
Cyclohexane	0.24 U	10	0.24	1	10/06/15 13:46	
Dibromochloromethane	0.21 U	1.0	0.21	1	10/06/15 13:46	
Dichlorodifluoromethane	0.23 U	20	0.23	1	10/06/15 13:46	
Ethylbenzene	0.21 U	1.0	0.21	1	10/06/15 13:46	
Isopropylbenzene	0.14 U	1.0	0.14	1	10/06/15 13:46	
m,p-Xylenes	0.31 U	2.0	0.31	1	10/06/15 13:46	
Methyl Acetate	0.84 U	10	0.84	1	10/06/15 13:46	
Methyl tert-Butyl Ether	0.24 U	2.0	0.24	1	10/06/15 13:46	
Methylene Chloride	0.21 U	5.0	0.21	1	10/06/15 13:46	
o-Xylene	0.14 U	1.0	0.14	1	10/06/15 13:46	
Styrene	0.29 U	1.0	0.29	1	10/06/15 13:46	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	JQ1507607-03	**Basis:**	NA

Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Analyte Name	Result	PQL	MDL	Dil.	Date Analyzed	Q
Tetrachloroethene (PCE)	0.22 U	1.0	0.22	1	10/06/15 13:46	
Toluene	0.19 U	1.0	0.19	1	10/06/15 13:46	
trans-1,2-Dichloroethene	0.19 U	1.0	0.19	1	10/06/15 13:46	
trans-1,3-Dichloropropene	0.23 U	1.0	0.23	1	10/06/15 13:46	
Trichloroethene (TCE)	0.36 U	1.0	0.36	1	10/06/15 13:46	
Trichlorofluoromethane	0.24 U	20	0.24	1	10/06/15 13:46	
Trichlorotrifluoroethane	0.28 U	20	0.28	1	10/06/15 13:46	
Vinyl Chloride	0.36 U	1.0	0.36	1	10/06/15 13:46	

Surrogate Name	% Rec	Control Limits	Date Analyzed	Q
1,2-Dichloroethane-d4	105	72 - 121	10/06/15 13:46	
4-Bromofluorobenzene	97	86 - 113	10/06/15 13:46	
Dibromofluoromethane	101	86 - 112	10/06/15 13:46	
Toluene-d8	96	88 - 115	10/06/15 13:46	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	120.1	**Units:**	uMHOS/cm
		Basis:	NA

Conductivity, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**1178**	-	-	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**3321**	-	-	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**3289**	-	-	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**1826**	-	-	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**3454**	-	-	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**2554**	-	-	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**3337**	-	-	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**2434**	-	-	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**224**	-	-	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	**2671**	-	-	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**2633**	-	-	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**2615**	-	-	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**3526**	-	-	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**3503**	-	-	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**3096**	-	-	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**3182**	-	-	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**2532**	-	-	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**1264**	-	-	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**1151**	-	-	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**3485**	-	-	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**2816**	-	-	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**1617**	-	-	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**787**	-	-	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**1212**	-	-	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**1163**	-	-	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**2673**	-	-	1	09/29/15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	150.1	**Units:**	pH Units
		Basis:	NA

pH, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**6.78**	-	-	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**6.56**	-	-	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**6.52**	-	-	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**6.56**	-	-	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**6.47**	-	-	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**6.77**	-	-	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**6.98**	-	-	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**7.17**	-	-	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**5.08**	-	-	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	**6.90**	-	-	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**6.73**	-	-	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**6.94**	-	-	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**6.45**	-	-	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**6.64**	-	-	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**6.56**	-	-	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**6.61**	-	-	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**6.69**	-	-	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**6.75**	-	-	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**6.87**	-	-	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**6.48**	-	-	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**6.64**	-	-	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**7.17**	-	-	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**7.18**	-	-	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**6.71**	-	-	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**6.60**	-	-	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**6.62**	-	-	1	09/29/15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	170.1	**Units:**	deg C
		Basis:	NA

Temperature, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**29.97**	-	-	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**30.14**	-	-	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**29.48**	-	-	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**29.16**	-	-	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**28.23**	-	-	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**27.21**	-	-	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**26.9**	-	-	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**27.9**	-	-	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**28.0**	-	-	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	**27.1**	-	-	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**27.2**	-	-	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**26.2**	-	-	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**26.75**	-	-	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**27.07**	-	-	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**27.71**	-	-	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**27.05**	-	-	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**27.57**	-	-	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**27.34**	-	-	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**26.43**	-	-	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**24.6**	-	-	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**24.8**	-	-	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**25.2**	-	-	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**26.5**	-	-	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**26.8**	-	-	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**26.9**	-	-	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**24.9**	-	-	1	09/29/15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	180.1	**Units:**	NTU
		Basis:	NA

Turbidity, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**3.29**	-	-	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**6.29**	-	-	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**8.13**	-	-	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**9.64**	-	-	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**6.24**	-	-	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**3.87**	-	-	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**5.15**	-	-	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**2.2**	-	-	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**16.6**	-	-	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	**2.3**	-	-	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**1.7**	-	-	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**0.74**	-	-	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**5.18**	-	-	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**13.8**	-	-	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**6.29**	-	-	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**11.6**	-	-	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**1.14**	-	-	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**3.06**	-	-	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**5.78**	-	-	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**4.7**	-	-	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**7.1**	-	-	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**4.4**	-	-	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**2.1**	-	-	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**0.93**	-	-	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**1.1**	-	-	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**2.1**	-	-	1	09/29/15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	Depth Field	**Units:**	Feet
		Basis:	NA

Depth

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**6.67**	-	-	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**5.40**	-	-	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**5.24**	-	-	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**6.08**	-	-	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**6.10**	-	-	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**5.84**	-	-	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**7.05**	-	-	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**5.93**	-	-	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**7.18**	-	-	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	**7.44**	-	-	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**8.03**	-	-	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**8.64**	-	-	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**5.94**	-	-	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**6.07**	-	-	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**6.08**	-	-	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**6.04**	-	-	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**6.23**	-	-	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**6.75**	-	-	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**2.42**	-	-	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**7.76**	-	-	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**4.06**	-	-	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**7.08**	-	-	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**2.95**	-	-	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**3.86**	-	-	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**3.69**	-	-	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**8.17**	-	-	1	09/29/15	

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Analytical Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Collected:**	09/30/15
Sample Matrix:	Water	**Date Received:**	09/30/15
Analysis Method:	SM 4500-O G	**Units:**	mg/L
		Basis:	NA

Dissolved Oxygen, Field

Sample Name	Lab Code	Result	PQL	MDL	Dil.	Date Analyzed	Q
M505-MW0013IS-025.5-20150928	J1507821-001	**1.25**	0.10	0.10	1	09/28/15	
M505-MW0039-032.5-20150928	J1507821-002	**0.26**	0.10	0.10	1	09/28/15	
M505-MW0044-027.5-20150928	J1507821-003	**0.25**	0.10	0.10	1	09/28/15	
M505-MW0041-025.0-20150928	J1507821-004	**0.31**	0.10	0.10	1	09/28/15	
M505-MW0042-035.0-20150928	J1507821-005	**0.26**	0.10	0.10	1	09/28/15	
M505-MW0023-025.0-20150928	J1507821-006	**0.18**	0.10	0.10	1	09/28/15	
M505-MW0055-025.0-20150928	J1507821-007	**0.12**	0.10	0.10	1	09/28/15	
M505-MW0053-010.0-20150928	J1507821-008	**0.28**	0.10	0.10	1	09/28/15	
M505-MW0052-010.0-20150928	J1507821-009	**0.18**	0.10	0.10	1	09/28/15	
M505-MW0051-025.0-20150928	J1507821-010	ND U	0.10	0.10	1	09/28/15	
M505-MW0033-025.0-20150928	J1507821-011	**0.19**	0.10	0.10	1	09/28/15	
M505-MW0032-035.0-20150928	J1507821-012	**0.19**	0.10	0.10	1	09/28/15	
M505-MW0038-025.0-20150929	J1507821-013	**0.31**	0.10	0.10	1	09/29/15	
M505-MW0020-036.0-20150929	J1507821-014	**0.35**	0.10	0.10	1	09/29/15	
M505-MW0048-027.5-20150929	J1507821-015	**0.20**	0.10	0.10	1	09/29/15	
M505-MW0018-036.0-20150929	J1507821-016	**0.18**	0.10	0.10	1	09/29/15	
M505-MW0022-025.0-20150929	J1507821-017	**0.26**	0.10	0.10	1	09/29/15	
M505-MW0027-025.0-20150929	J1507821-018	**0.17**	0.10	0.10	1	09/29/15	
M505-MW0028-025.0-20150929	J1507821-019	**0.18**	0.10	0.10	1	09/29/15	
M505-MW0025-025.0-20150929	J1507821-020	**0.23**	0.10	0.10	1	09/29/15	
M505-MW0035-025.0-20150929	J1507821-021	**0.31**	0.10	0.10	1	09/29/15	
M505-MW0030-025.0-20150929	J1507821-022	**0.21**	0.10	0.10	1	09/29/15	
M505-MW0021-025.0-20150929	J1507821-023	**0.26**	0.10	0.10	1	09/29/15	
M505-MW0057-025.0-20150929	J1507821-024	**0.24**	0.10	0.10	1	09/29/15	
M505-MW0059-025.0-20150929	J1507821-025	**0.23**	0.10	0.10	1	09/29/15	
M505-MW0049-027.5-20150929	J1507821-026	**0.27**	0.10	0.10	1	09/29/15	

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QA/QC Report

Client: Levine Fricke **Service Request:** J1507821

Project: NASA M505/TL014020.0000

Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	1,2-Dichloroethane-d4 72 - 121	4-Bromofluorobenzene 86 - 113	Dibromofluoromethane 86 - 112
M505-MW0013IS-025.5-20150928	J1507821-001	105	98	103
M505-MW0039-032.5-20150928	J1507821-002	103	99	101
M505-MW0044-027.5-20150928	J1507821-003	105	98	101
M505-MW0041-025.0-20150928	J1507821-004	105	100	102
M505-MW0042-035.0-20150928	J1507821-005	105	98	102
M505-MW0023-025.0-20150928	J1507821-006	107	100	100
M505-MW0055-025.0-20150928	J1507821-007	107	98	101
M505-MW0053-010.0-20150928	J1507821-008	106	101	105
M505-MW0052-010.0-20150928	J1507821-009	106	100	101
M505-MW0051-025.0-20150928	J1507821-010	107	98	102
M505-MW0033-025.0-20150928	J1507821-011	107	98	103
M505-MW0032-035.0-20150928	J1507821-012	106	97	104
M505-MW0038-025.0-20150929	J1507821-013	109	98	104
M505-MW0020-036.0-20150929	J1507821-014	105	98	100
M505-MW0048-027.5-20150929	J1507821-015	106	98	102
M505-MW0018-036.0-20150929	J1507821-016	110	96	103
M505-MW0022-025.0-20150929	J1507821-017	106	98	100
M505-MW0027-025.0-20150929	J1507821-018	107	96	104
M505-MW0028-025.0-20150929	J1507821-019	109	98	102
M505-MW0025-025.0-20150929	J1507821-020	108	97	103
M505-MW0035-025.0-20150929	J1507821-021	106	96	101
M505-MW0030-025.0-20150929	J1507821-022	106	97	100
M505-MW0021-025.0-20150929	J1507821-023	107	98	99
M505-MW0057-025.0-20150929	J1507821-024	106	96	103
M505-MW0059-025.0-20150929	J1507821-025	104	97	100
M505-MW0049-027.5-20150929	J1507821-026	107	97	101
Trip Blank	J1507821-027	103	96	101
Lab Control Sample	JQ1507532-01	99	98	101
Duplicate Lab Control Sample	JQ1507532-02	102	99	101
Method Blank	JQ1507532-03	104	95	101
Lab Control Sample	JQ1507607-01	105	99	105
Duplicate Lab Control Sample	JQ1507607-02	103	99	101
Method Blank	JQ1507607-03	105	97	101

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QA/QC Report

Client: Levine Fricke **Service Request:** J1507821
Project: NASA M505/TL014020.0000
Sample Matrix: Water

SURROGATE RECOVERY SUMMARY
Volatile Organic Compounds by GC/MS

Analysis Method: 8260B

Sample Name	Lab Code	Toluene-d8 88 - 115
M505-MW0013IS-025.5-20150928	J1507821-001	100
M505-MW0039-032.5-20150928	J1507821-002	101
M505-MW0044-027.5-20150928	J1507821-003	99
M505-MW0041-025.0-20150928	J1507821-004	101
M505-MW0042-035.0-20150928	J1507821-005	101
M505-MW0023-025.0-20150928	J1507821-006	97
M505-MW0055-025.0-20150928	J1507821-007	101
M505-MW0053-010.0-20150928	J1507821-008	99
M505-MW0052-010.0-20150928	J1507821-009	101
M505-MW0051-025.0-20150928	J1507821-010	99
M505-MW0033-025.0-20150928	J1507821-011	98
M505-MW0032-035.0-20150928	J1507821-012	99
M505-MW0038-025.0-20150929	J1507821-013	99
M505-MW0020-036.0-20150929	J1507821-014	102
M505-MW0048-027.5-20150929	J1507821-015	99
M505-MW0018-036.0-20150929	J1507821-016	100
M505-MW0022-025.0-20150929	J1507821-017	100
M505-MW0027-025.0-20150929	J1507821-018	101
M505-MW0028-025.0-20150929	J1507821-019	97
M505-MW0025-025.0-20150929	J1507821-020	99
M505-MW0035-025.0-20150929	J1507821-021	96
M505-MW0030-025.0-20150929	J1507821-022	96
M505-MW0021-025.0-20150929	J1507821-023	98
M505-MW0057-025.0-20150929	J1507821-024	97
M505-MW0059-025.0-20150929	J1507821-025	98
M505-MW0049-027.5-20150929	J1507821-026	99
Trip Blank	J1507821-027	98
Lab Control Sample	JQ1507532-01	101
Duplicate Lab Control Sample	JQ1507532-02	100
Method Blank	JQ1507532-03	101
Lab Control Sample	JQ1507607-01	100
Duplicate Lab Control Sample	JQ1507607-02	101
Method Blank	JQ1507607-03	96

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QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Analyzed:**	10/05/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	465411

	Lab Control Sample JQ1507532-01			Duplicate Lab Control Sample JQ1507532-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	49.1	50.0	98	48.9	50.0	98	77-118	<1	30
1,1,1-Trichloroethane (TCA)	49.5	50.0	99	51.6	50.0	103	70-122	4	30
1,1,2,2-Tetrachloroethane	46.7	50.0	93	48.4	50.0	97	66-135	4	30
1,1,2-Trichloroethane	47.2	50.0	94	49.5	50.0	99	75-122	5	30
1,1-Dichloroethane (1,1-DCA)	47.9	50.0	96	50.1	50.0	100	79-117	4	30
1,1-Dichloroethene (1,1-DCE)	51.6	50.0	103	54.2	50.0	108	72-128	5	30
1,2,3-Trichlorobenzene	49.7	50.0	99	52.0	50.0	104	62-136	4	30
1,2,4-Trichlorobenzene	50.3	50.0	101	52.3	50.0	105	66-127	4	30
1,2-Dibromo-3-chloropropane (DBCP)	49.8	50.0	100	51.3	50.0	103	60-122	3	30
1,2-Dibromoethane (EDB)	47.7	50.0	95	48.3	50.0	97	76-118	1	30
1,2-Dichlorobenzene	49.1	50.0	98	50.3	50.0	101	81-115	2	30
1,2-Dichloroethane	47.7	50.0	95	50.1	50.0	100	70-117	5	30
1,2-Dichloropropane	47.3	50.0	95	48.4	50.0	97	79-117	2	30
1,3-Dichlorobenzene	49.6	50.0	99	50.5	50.0	101	82-116	2	30
1,4-Dichlorobenzene	48.5	50.0	97	51.1	50.0	102	82-115	5	30
2-Butanone (MEK)	48.4	50.0	97	47.9	50.0	96	62-138	1	30
2-Hexanone	47.0	50.0	94	48.7	50.0	97	74-127	4	30
4-Methyl-2-pentanone (MIBK)	48.6	50.0	97	49.8	50.0	100	77-120	3	30
Acetone	47.4	50.0	95	50.1	50.0	100	42-161	6	30
Benzene	49.2	50.0	98	50.7	50.0	101	80-117	3	30
Bromochloromethane	47.5	50.0	95	48.1	50.0	96	78-118	1	30
Bromodichloromethane	46.8	50.0	94	49.0	50.0	98	75-118	5	30
Bromoform	46.9	50.0	94	47.5	50.0	95	63-121	1	30
Bromomethane	43.2	50.0	86	43.4	50.0	87	31-153	<1	30
Carbon Disulfide	51.5	50.0	103	54.6	50.0	109	72-128	6	30
Carbon Tetrachloride	50.5	50.0	101	51.8	50.0	104	67-124	2	30
Chlorobenzene	49.9	50.0	100	50.4	50.0	101	83-118	<1	30
Chloroethane	42.9	50.0	86	44.2	50.0	88	68-132	3	30
Chloroform	49.4	50.0	99	51.7	50.0	103	77-116	4	30
Chloromethane	43.1	50.0	86	43.5	50.0	87	60-128	1	30
cis-1,2-Dichloroethene	49.1	50.0	98	50.6	50.0	101	78-117	3	30
cis-1,3-Dichloropropene	47.5	50.0	95	48.5	50.0	97	80-119	2	30
Cyclohexane	46.3	50.0	93	47.5	50.0	95	75-124	3	30
Dibromochloromethane	48.8	50.0	98	50.0	50.0	100	74-121	3	30
Dichlorodifluoromethane	53.9	50.0	108	54.6	50.0	109	49-132	1	30
Ethylbenzene	50.5	50.0	101	49.9	50.0	100	82-119	1	30
Isopropylbenzene	51.6	50.0	103	52.9	50.0	106	78-119	3	30
m,p-Xylenes	104	100	104	105	100	105	79-122	<1	30
Methyl Acetate	52.3	50.0	105	54.0	50.0	108	50-137	3	30
Methyl tert-Butyl Ether	47.6	50.0	95	49.4	50.0	99	73-118	4	30
Methylene Chloride	45.4	50.0	91	47.0	50.0	94	75-123	4	30

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QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Analyzed:**	10/05/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	465411

	Lab Control Sample JQ1507532-01			Duplicate Lab Control Sample JQ1507532-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	51.0	50.0	102	52.0	50.0	104	80-119	2	30
Styrene	51.1	50.0	102	51.8	50.0	104	80-121	1	30
Tetrachloroethene (PCE)	48.9	50.0	98	48.9	50.0	98	75-126	<1	30
Toluene	49.6	50.0	99	50.4	50.0	101	52-152	2	30
trans-1,2-Dichloroethene	49.6	50.0	99	51.2	50.0	102	75-121	3	30
trans-1,3-Dichloropropene	50.1	50.0	100	51.2	50.0	102	76-118	2	30
Trichloroethene (TCE)	50.0	50.0	100	51.9	50.0	104	78-122	4	30
Trichlorofluoromethane	44.7	50.0	89	46.5	50.0	93	58-134	4	30
Trichlorotrifluoroethane	52.2	50.0	104	53.6	50.0	107	77-128	3	30
Vinyl Chloride	45.8	50.0	92	47.7	50.0	95	69-138	4	30

ALS Group USA, Corp.
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QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Analyzed:**	10/06/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	465515

	Lab Control Sample JQ1507607-01			Duplicate Lab Control Sample JQ1507607-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
1,1,1,2-Tetrachloroethane	49.3	50.0	99	49.9	50.0	100	77-118	1	30
1,1,1-Trichloroethane (TCA)	53.3	50.0	107	50.6	50.0	101	70-122	5	30
1,1,2,2-Tetrachloroethane	49.1	50.0	98	48.9	50.0	98	66-135	<1	30
1,1,2-Trichloroethane	47.7	50.0	95	48.3	50.0	97	75-122	1	30
1,1-Dichloroethane (1,1-DCA)	50.9	50.0	102	50.0	50.0	100	79-117	2	30
1,1-Dichloroethene (1,1-DCE)	54.8	50.0	110	54.6	50.0	109	72-128	<1	30
1,2,3-Trichlorobenzene	50.6	50.0	101	51.3	50.0	103	62-136	1	30
1,2,4-Trichlorobenzene	51.2	50.0	102	52.3	50.0	105	66-127	2	30
1,2-Dibromo-3-chloropropane (DBCP)	51.0	50.0	102	50.6	50.0	101	60-122	<1	30
1,2-Dibromoethane (EDB)	48.6	50.0	97	48.6	50.0	97	76-118	<1	30
1,2-Dichlorobenzene	50.1	50.0	100	50.0	50.0	100	81-115	<1	30
1,2-Dichloroethane	49.4	50.0	99	49.6	50.0	99	70-117	<1	30
1,2-Dichloropropane	48.8	50.0	98	48.7	50.0	97	79-117	<1	30
1,3-Dichlorobenzene	49.9	50.0	100	50.3	50.0	101	82-116	<1	30
1,4-Dichlorobenzene	50.4	50.0	101	50.1	50.0	100	82-115	<1	30
2-Butanone (MEK)	47.9	50.0	96	49.8	50.0	100	62-138	4	30
2-Hexanone	48.2	50.0	96	49.4	50.0	99	74-127	2	30
4-Methyl-2-pentanone (MIBK)	49.3	50.0	99	48.7	50.0	97	77-120	1	30
Acetone	49.9	50.0	100	47.8	50.0	96	42-161	4	30
Benzene	51.6	50.0	103	51.2	50.0	102	80-117	<1	30
Bromochloromethane	50.1	50.0	100	47.0	50.0	94	78-118	6	30
Bromodichloromethane	49.8	50.0	100	49.3	50.0	99	75-118	1	30
Bromoform	49.2	50.0	98	49.4	50.0	99	63-121	<1	30
Bromomethane	46.0	50.0	92	43.6	50.0	87	31-153	5	30
Carbon Disulfide	54.7	50.0	109	54.8	50.0	110	72-128	<1	30
Carbon Tetrachloride	53.2	50.0	106	52.2	50.0	104	67-124	2	30
Chlorobenzene	50.5	50.0	101	50.7	50.0	101	83-118	<1	30
Chloroethane	47.4	50.0	95	46.3	50.0	93	68-132	2	30
Chloroform	51.8	50.0	104	50.0	50.0	100	77-116	4	30
Chloromethane	48.4	50.0	97	43.3	50.0	87	60-128	11	30
cis-1,2-Dichloroethene	51.7	50.0	103	51.6	50.0	103	78-117	<1	30
cis-1,3-Dichloropropene	48.7	50.0	97	49.4	50.0	99	80-119	1	30
Cyclohexane	50.2	50.0	100	48.3	50.0	97	75-124	4	30
Dibromochloromethane	49.7	50.0	99	49.9	50.0	100	74-121	<1	30
Dichlorodifluoromethane	60.4	50.0	121	58.0	50.0	116	49-132	4	30
Ethylbenzene	51.1	50.0	102	51.4	50.0	103	82-119	<1	30
Isopropylbenzene	51.4	50.0	103	51.6	50.0	103	78-119	<1	30
m,p-Xylenes	106	100	106	107	100	107	79-122	1	30
Methyl Acetate	56.1	50.0	112	56.1	50.0	112	50-137	<1	30
Methyl tert-Butyl Ether	50.2	50.0	100	49.0	50.0	98	73-118	2	30
Methylene Chloride	47.0	50.0	94	46.4	50.0	93	75-123	1	30

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QA/QC Report

Client:	Levine Fricke	**Service Request:**	J1507821
Project:	NASA M505/TL014020.0000	**Date Analyzed:**	10/06/15
Sample Matrix:	Water		

Duplicate Lab Control Sample Summary
Volatile Organic Compounds by GC/MS

Analysis Method:	8260B	**Units:**	ug/L
		Basis:	NA
		Analysis Lot:	465515

	Lab Control Sample JQ1507607-01			Duplicate Lab Control Sample JQ1507607-02					
Analyte Name	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
o-Xylene	51.4	50.0	103	52.8	50.0	106	80-119	3	30
Styrene	52.6	50.0	105	53.0	50.0	106	80-121	<1	30
Tetrachloroethene (PCE)	48.9	50.0	98	48.7	50.0	97	75-126	<1	30
Toluene	50.3	50.0	101	50.3	50.0	101	52-152	<1	30
trans-1,2-Dichloroethene	52.4	50.0	105	50.8	50.0	102	75-121	3	30
trans-1,3-Dichloropropene	51.3	50.0	103	51.3	50.0	102	76-118	<1	30
Trichloroethene (TCE)	52.4	50.0	105	51.3	50.0	103	78-122	2	30
Trichlorofluoromethane	50.2	50.0	100	48.5	50.0	97	58-134	4	30
Trichlorotrifluoroethane	55.2	50.0	110	53.6	50.0	107	77-128	3	30
Vinyl Chloride	48.7	50.0	97	48.1	50.0	96	69-138	1	30

ALS Environmental

Cooler Receipt Form

Client: Arcadis

Service Request #: J1507821

Project: NASA MSOS

Cooler received on 9/30/15 and opened on 9/30/15 by MGW

COURIER: ALS UPS FEDEX Client Other _____ Airbill # 8088 9958 0961

1	Were custody seals on outside of cooler?	(Yes)	No			
	If yes, how many and where?	#: 1	on lid	other		
2	Were seals intact and signature and date correct?	(Yes)	No	N/A		
3	Were custody papers properly filled out?	(Yes)	No	N/A		
4	Temperature of cooler(s) upon receipt (Should be 0°C and ≤ 6°C)	0.4				
5	Thermometer ID	T71				
6	Temperature Blank Present?	(Yes)	No			
7	Were Ice or Ice Packs present	(Ice)	Ice Packs	No		
8	Did all bottles arrive in good condition (unbroken, etc....)?	(Yes)	No	N/A		
9	Type of packing material present	Netting	Vial Holder	Bubble Wrap		
		Paper	Styrofoam	Other	N/A	
10	Were all bottle labels complete (sample ID, preservation, etc....)?	(Yes)	No	N/A		
11	Did all bottle labels and tags agree with custody papers?	(Yes)	No	N/A		
12	Were the correct bottles used for the tests indicated?	(Yes)	No	N/A		
13	Were all of the preserved bottles received with the appropriate preservative?	Yes	No	(N/A)		
	HNO3 pH<2 H2SO4 pH<2 ZnAc2/NaOH pH>9 NaOH pH>12 HCl pH<2					
	Preservative additions noted below					
14	Were all samples received within analysis holding times?	(Yes)	No	N/A		
15	Were all VOA vials free of air bubbles? If present, note below	Yes	(No)	N/A		
16	Where did the bottles originate?	(ALS)	Client			

Sample ID	Reagent	Lot #	ml added	Initials Date/Time

Additional comments and/or explanation of all discrepancies noted above:

MGW 9/30/15 All bottles had

All VOA vials contained headspace

Client approval to run samples if discrepancies noted: Date:

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

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SR# J1507821

CAS Contract

Project Name: NASA M505	Project Number: TL014020.0000
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@Arcadis-US.com
Company/Address: ARCADIS 14025 Riveredge Dr #600 Tampa FL 33637	
Phone #: 813-903-3100	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DANKERT

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

J1507821 5
Levine Fricke
NASA M505

PRESERVATIVE: 1

NUMBER OF CONTAINERS: 3

8260B VOC's

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260B VOC's
M505-MW0013IS-025.5-	20150928	9/28/15	1333	GW	3	X
M505-MW0038-032.5-	20150928		1420		3	X
M505-MW0044-027.5-	20150928		1504		3	X
M505-MW0041-025.0-	20150928		1545		3	X
M505-MW0042-035.0-	20150928		1624		3	X
M505-MW0023-025.0-	20150928		1707		3	X
M505-MW0055-025.0-	20150928		1325		3	X
M505-MW0053-010.0-	20150928		1406		3	X
M505-MW0052-010.0-	20150928		1449		3	X
M505-MW0051-025.0-	20150928		1532		3	X
M505-MW0033-025.0-	20150928	9/28/15	1613	GW	3	X

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
___ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data
___ V. Specialized Forms / Custom Report
Edata ___ Yes ___ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.4 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature: Michael Wallace	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name: Michael Wallace	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9/29/15 1600	Date/Time: 9/30/15 0950	Date/Time	Date/Time	Date/Time	Date/Time

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR# J1507821

CAS Contract

Project Name: NASA - M505	Project Number: TL014020.0000
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@ARCADIS.COM
Company/Address: ARCADIS 14025 Riveredge Dr. #600 TAMPA FL 33637	
Phone #: 813-903-3100	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DANKERT

ANALYSIS REQUESTED (Include Method Number)

PRESERVATIVE: 1

J1507821 5

Levine Fricke
NASA M505

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	8260 B VOA's
M505-MW0032-035.0-20150929		9/29/15	1648	GW	3	X
M505-MW0038-025.0-20150929		9/29/15	1020		3	X
M505-MW0020-036.0-20150929			1100		3	X
M505-MW0048-022.5-20150929			1146		3	X
M505-MW0018-036.0-20150929			1240		3	X
M505-MW0022-025.0-20150929			1328		3	X
M505-MW0027-025.0-20150929			1412		3	X
M505-MW0028-025.0-20150929			1454		3	X
M505-MW0025-025.0-20150929			1128		3	X
M505-MW0035-025.0-20150929			1013		3	X
M505-MW0030-025.0-20150929		9/29/15	1244	GW	3	X

1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

REMARKS/ ALTERNATE DESCRIPTION

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
X STANDARD
REQUESTED FAX DATE
REQUESTED REPORT DATE

REPORT REQUIREMENTS
_____ I. Results Only
_____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
_____ III. Results + QC and Calibration Summaries
_____ IV. Data Validation Report with Raw Data
_____ V. Specialized Forms / Custom Report
Edata _____ Yes _____ No

INVOICE INFORMATION
PO #
BILL TO:

SAMPLE RECEIPT: CONDITION/COOLER TEMP: 0.4 CUSTODY SEALS: Y N

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature	Signature	Signature	Signature	Signature	Signature
Printed Name: DAVID DANKERT	Printed Name: Michael Wallace	Printed Name	Printed Name	Printed Name	Printed Name
Firm: ARCADIS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 9/29/15	Date/Time: 9/30/15 0950	Date/Time	Date/Time	Date/Time	Date/Time

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

ALS Environmental

9143 Philips Highway, Ste 200 • Jacksonville, FL 32256 (904) 739-2277 • 800-695-7222 x06 • FAX (904) 739-2011

SR# J1507821

CAS Contract

Project Name: NASA M505	Project Number: FL014020-0000
Project Manager: SCOTT STARR	Email Address: SCOTT.STARR@arcadis-us.com
Company/Address: ARCADIS 14025 Riveredge Dr #600 TAMPA FL 33637	
Phone #: 813-394-9378	FAX #: —
Sampler's Signature:	Sampler's Printed Name: DAVID DAWKINS

ANALYSIS REQUESTED (Include Method Numbe

J1507821
Levine Fricke
NASA M505
5

PRESERVATIVE

NUMBER OF CONTAINERS

EDB & VOCs

1. HCl
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other ____

REMARKS/ ALTERNATE DESCRIPTION

CLIENT SAMPLE ID	LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	EDB & VOCs
M505-MW0021-025.0-20150929		9/29/15	1329	GW	3	X
M505-MW0057-025.0-20150929		"	1405	"	3	X
M505-MW0059-025.0-20150929		"	1444	"	3	X
M505-MW0049-027.5-20150929		9/29/15	1048	GW	3	X
TRIP BLANK		—	—	—	3	X

DD DD DD

SPECIAL INSTRUCTIONS/COMMENTS

See QAPP ☐

TURNAROUND REQUIREMENTS

___ RUSH (SURCHARGES APPLY)

X STANDARD

REQUESTED FAX DATE

REQUESTED REPORT DATE

REPORT REQUIREMENTS

___ I. Results Only

___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)

___ III. Results + QC and Calibration Summaries

___ IV. Data Validation Report with Raw Data

___ V. Specialized Forms / Custom Report

Edata ___ Yes ___ No

INVOICE INFORMATION

PO #

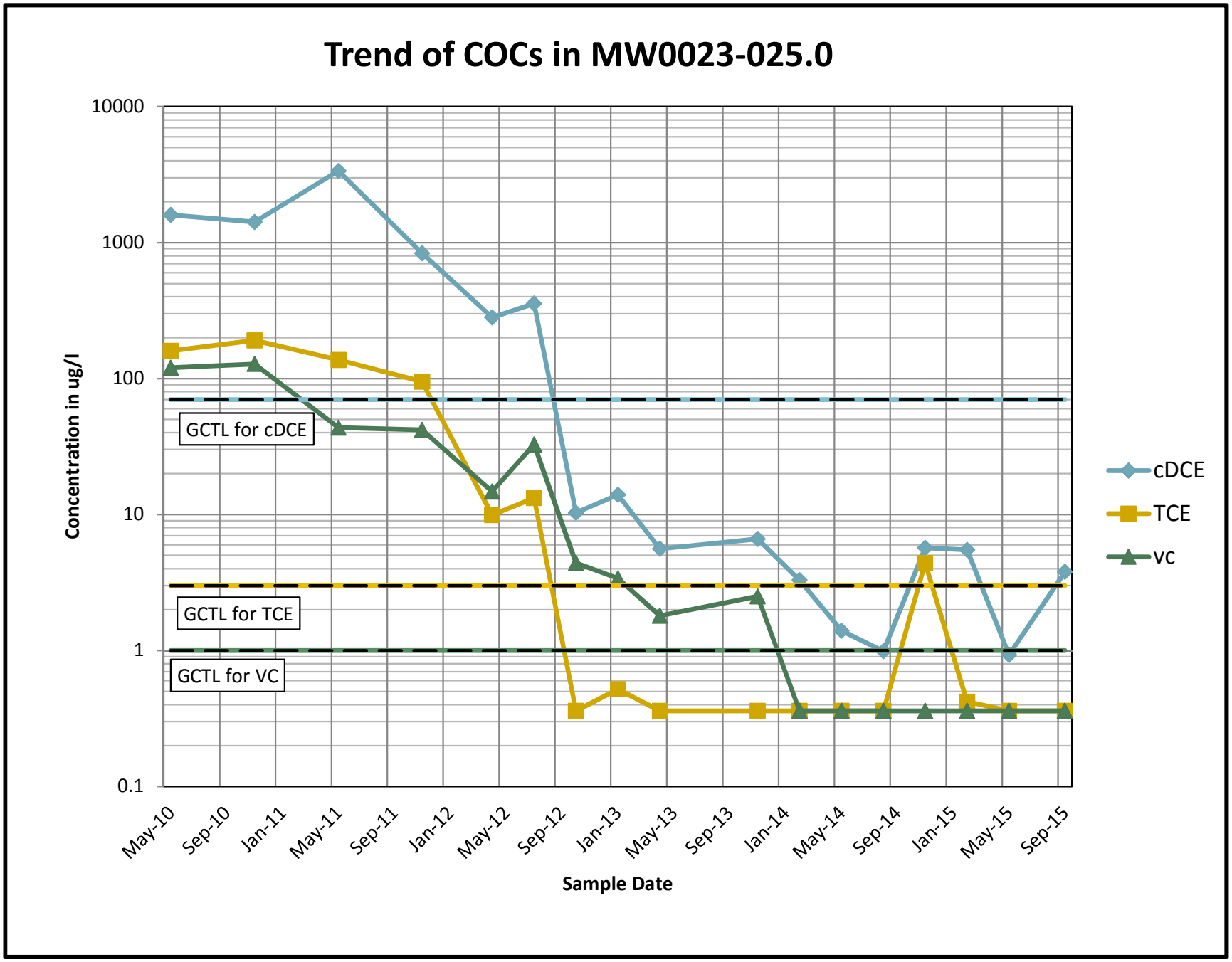
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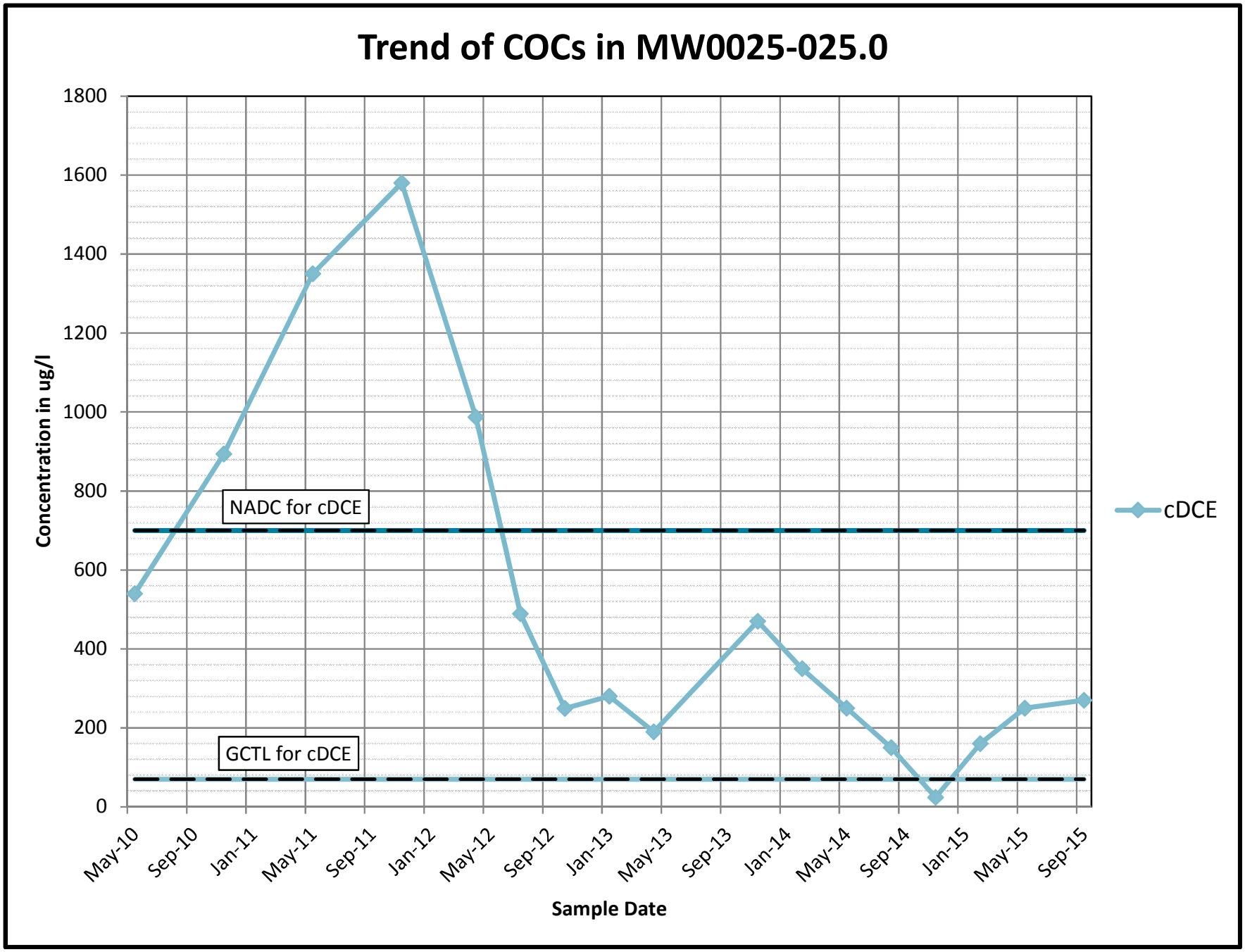
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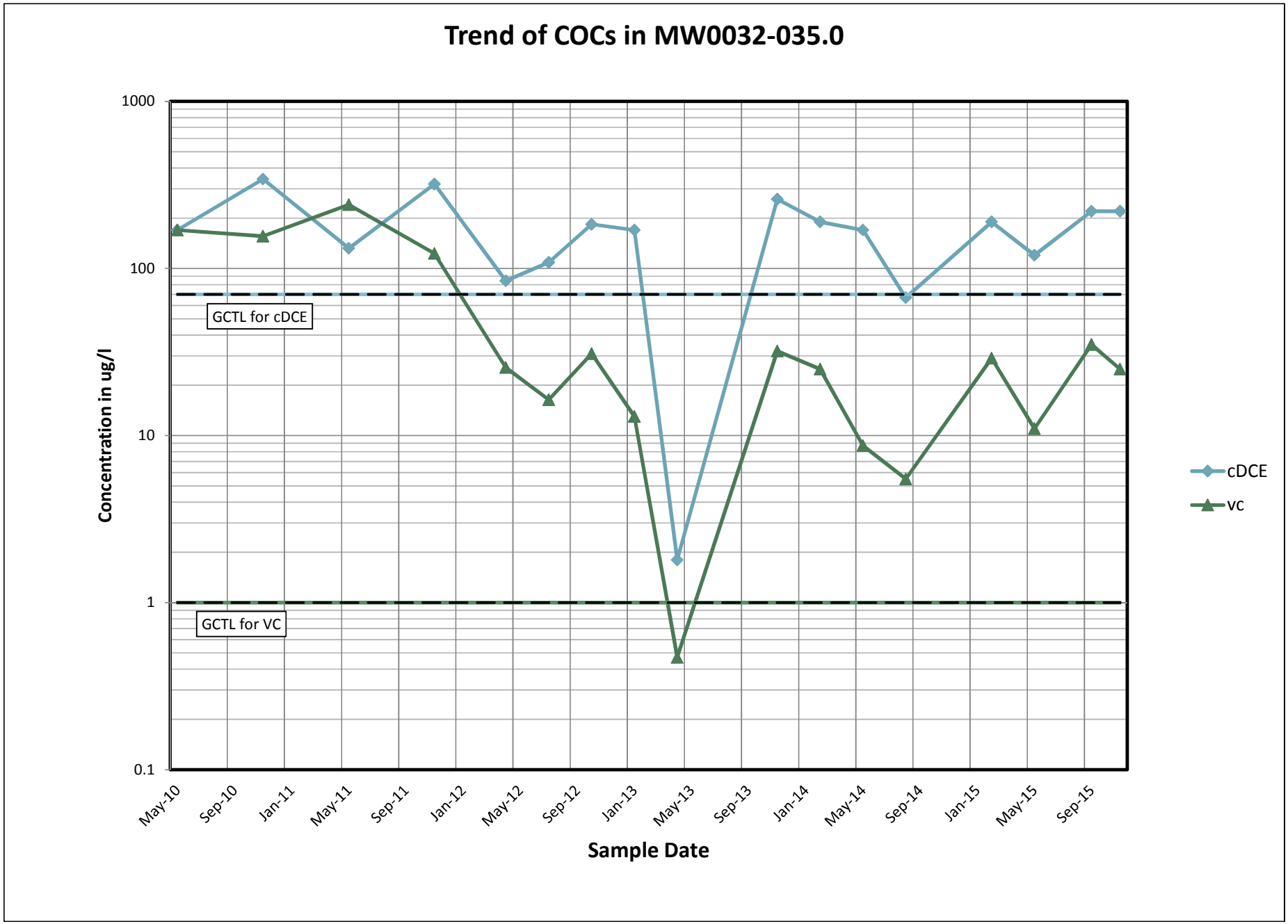
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Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: DAVID DAWKINS	Printed Name: Michael Wallace	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: ARCADIS	Firm: ALS	Firm:	Firm:	Firm:	Firm:
Date/Time: 9/29/15 1600	Date/Time: 9/30/15 0950	Date/Time:	Date/Time:	Date/Time:	Date/Time:

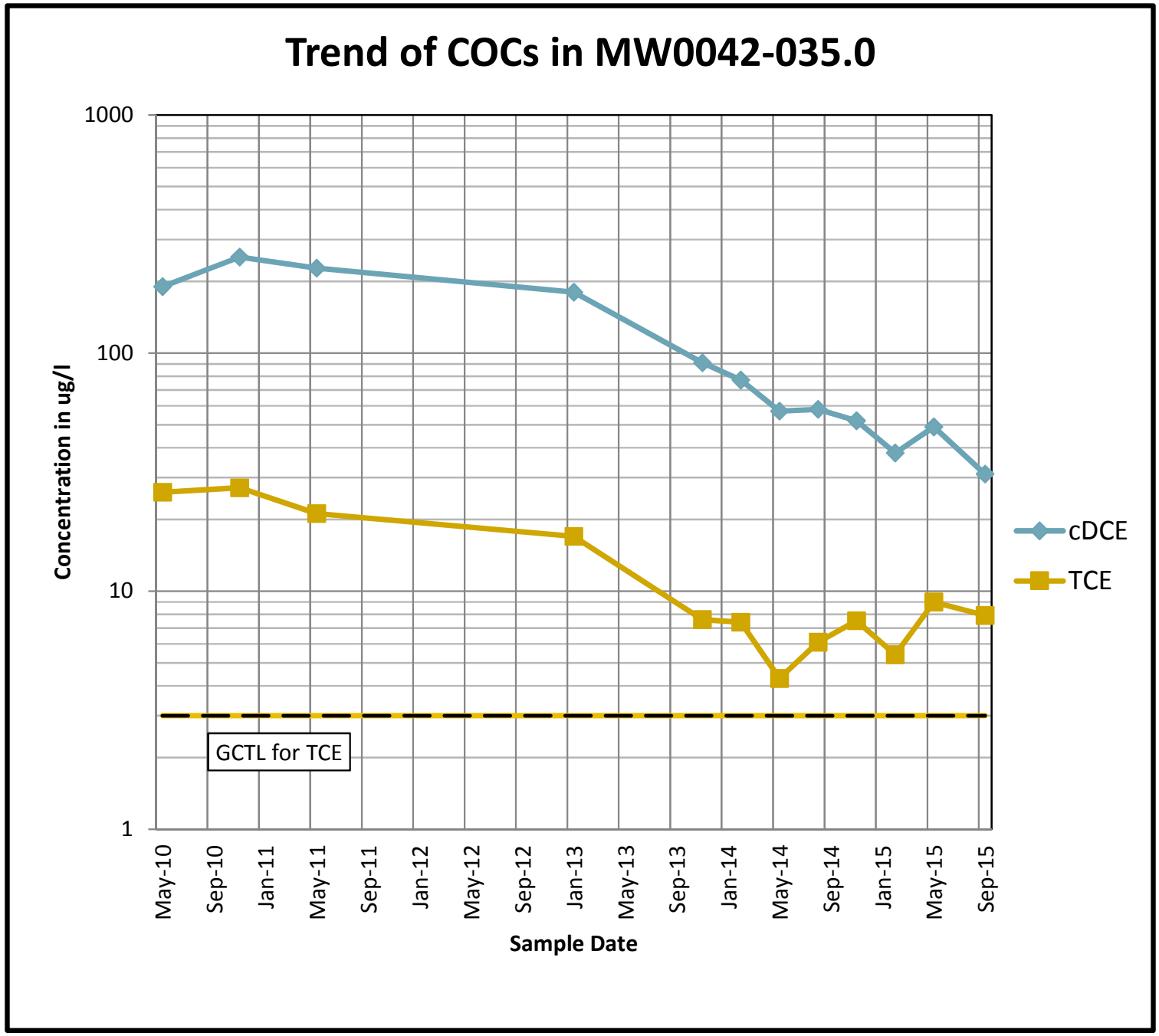
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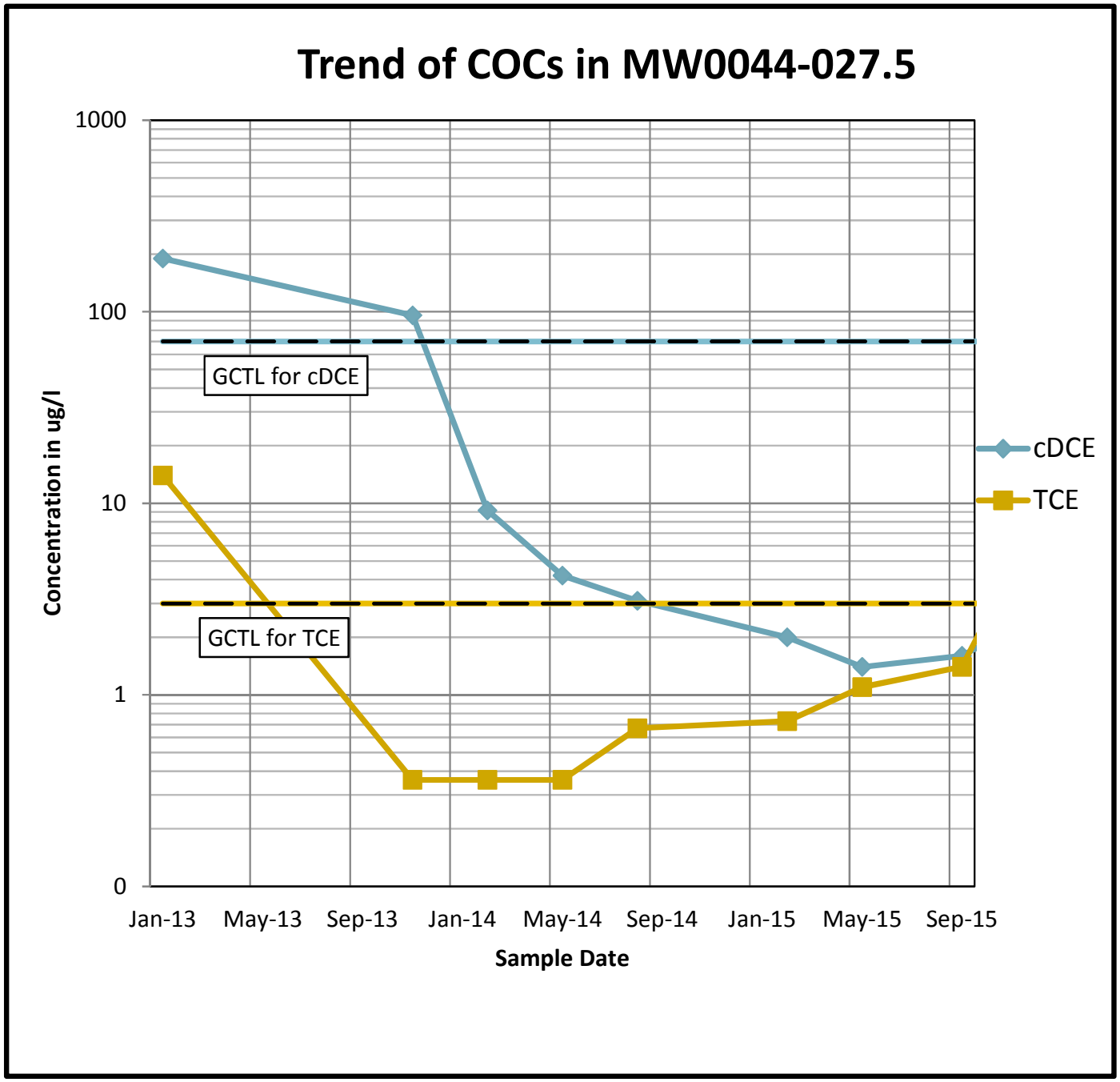
Groundwater Analytical Trend Graphs

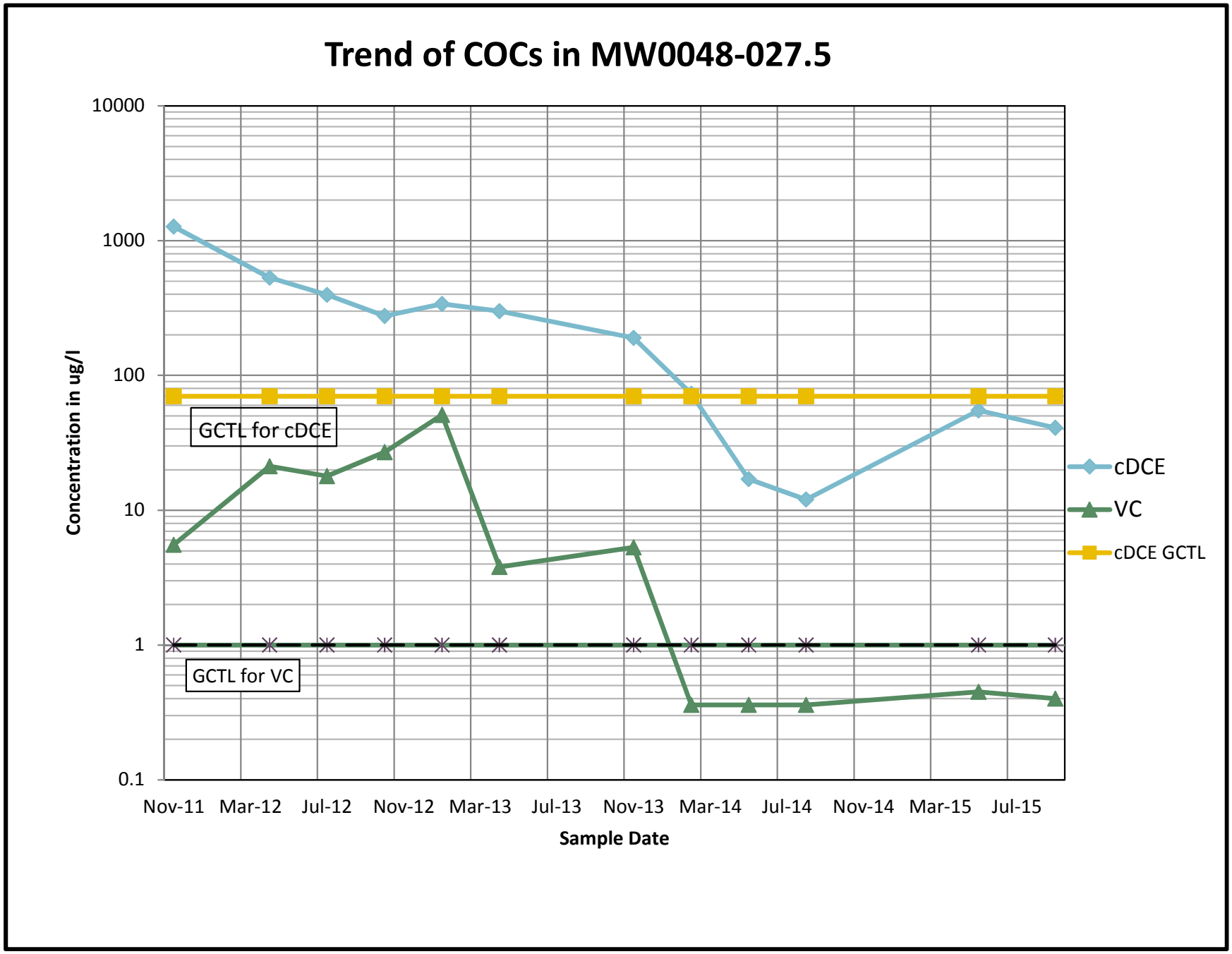

Trend of COCs in MW0023-025.0
Concentration in ug/l
10000
1000
100
10
1
0.1
GCTL for cDCE
GCTL for TCE
GCTL for VC
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Sample Date
cDCE
TCE
vc


Trend of COCs in MW0025-025.0
1800
1600
1400
1200
1000
800
600
400
200
0
Concentration in ug/l
NADC for cDCE
GCTL for cDCE
cDCE
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Sample Date

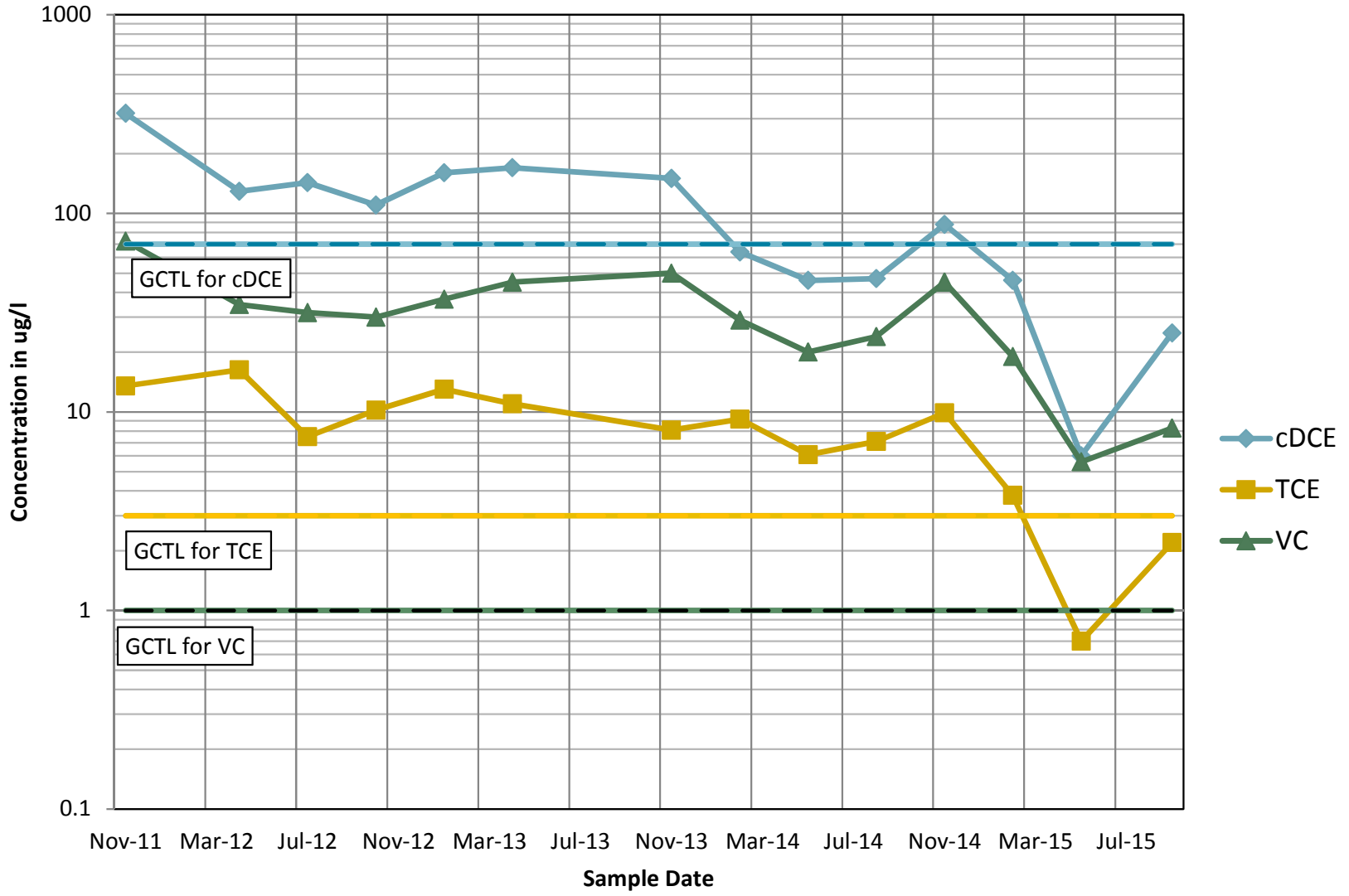

Trend of COCs in MW0032-035.0
1000
100
10
1
0.1
Concentration in ug/l
GCTL for cDCE
GCTL for VC
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Sample Date
cDCE
vc


Trend of COCs in MW0042-035.0
1000
100
10
1
Concentration in ug/l
GCTL for TCE
May-10
Sep-10
Jan-11
May-11
Sep-11
Jan-12
May-12
Sep-12
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Sep-14
Jan-15
May-15
Sep-15
Sample Date
cDCE
TCE

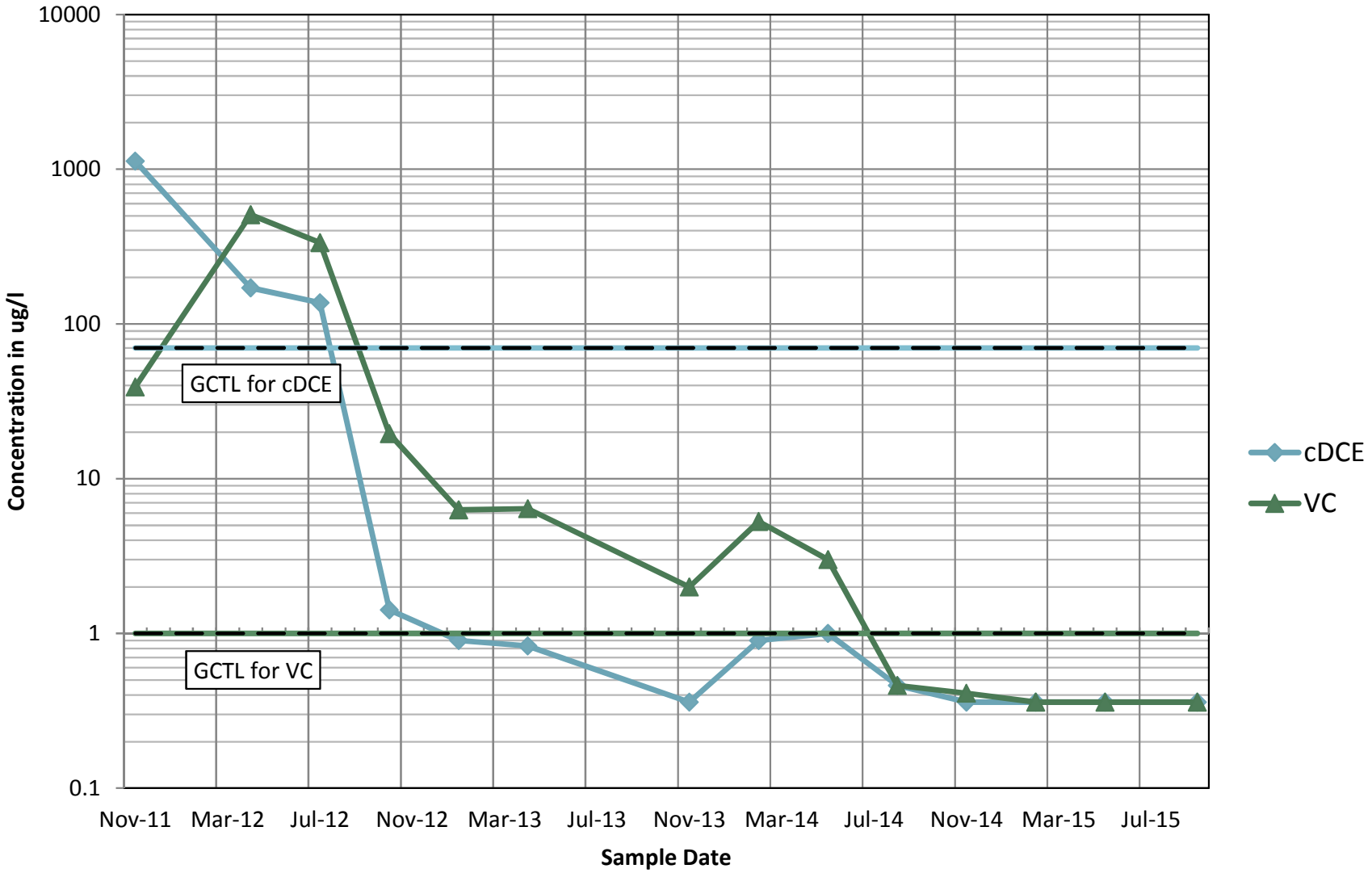

Trend of COCs in MW0044-027.5
1000
100
10
1
0
Concentration in ug/l
GCTL for cDCE
GCTL for TCE
cDCE
TCE
Jan-13
May-13
Sep-13
Jan-14
May-14
Sep-14
Jan-15
May-15
Sep-15
Sample Date


Trend of COCs in MW0048-027.5
10000
1000
100
10
1
0.1
Concentration in ug/l
GCTL for cDCE
GCTL for VC
Nov-11
Mar-12
Jul-12
Nov-12
Mar-13
Jul-13
Nov-13
Mar-14
Jul-14
Nov-14
Mar-15
Jul-15
Sample Date
cDCE
VC
cDCE GCTL

Trend of COCs in MW0051-025.0



Trend of COCs in MW0055-025.0



Appendix F

Excerpts from NASA Remediation Team Meeting Minutes

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
4/6/06	106	9	Starr, Scott	BUILDING M7-505 (SWMU 039)

Topic:

Building M7-505 Treatment Tank (SWMU 39)

Discussion:

TCE appears to have been successfully reduced. TCE levels are below the GCTL for the semi-annual and annual sampling events for the first time since system startup. The concentration of TCE in MW0013 has decreased approximately 96% since November 2002 (from 190 µg/L to 2.3 µg/L). cis-1,2-DCE has remained consistently above the GCTL in monitoring wells at MW0009 and MW0013. Analytical results indicated there has been a continual reduction of cis-1,2-DCE to levels below ½ of the NADC of 700 µg/L at the sampled wells. Vinyl chloride was above the GCTL in monitoring well MW0009 and in the downgradient monitoring well MW0005. Vinyl Chloride concentrations in MW0005 appear to have reached a steady state. The AS/VE system continues to reduce the mass of contaminants in groundwater. Effluent VE air samples during the 2nd half of the reporting period indicated COCs were below laboratory detection. Captured VOCs appear to have reached asymptotic levels. There appeared to be an increase in the vinyl chloride concentrations in monitoring well MW0009. Effective remediation is evidenced by the decrease of TCE and Cis-1,2-DCE in groundwater. Team consensus reached: to shutdown the AS/VE system to evaluate potential constituent rebound, perform two quarters of full round sampling of intermediate groundwater zone wells and re-evaluate system operation after two rounds of sampling, periodically energize system motors, and evaluate the need for an additional intermediate well downgradient of MW0005 pending the results of the LETF/M7-505 area RFI sampling.

Goal:

Present 2005 operation and monitoring data. Obtain team consensus on site operation, monitoring, and maintenance recommendations.

Decision:14	0604-D14 Building M7-505 Treatment Tank (SWMU 39) - Team consensus reached: to shutdown the AS/VE system to evaluate potential constituent rebound, perform two quarters of full round sampling of intermediate groundwater zone wells and re-evaluate system operation after two rounds of sampling, periodically energize system motors, and evaluate the need for an additional intermediate well downgradient of MW0005 pending the results of the LETF/M7-505 area RFI Sampling.

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
1/30/07	101	5	Dankerl, Erik	BUILDING M7-505 (SWMU 039)

Topic:

Waste Treatment Tank Building M7-505 (SWMU 39)

Discussion:

TCE may be rebounding at MW0010IS and MW0013IS. Based on the DPT and monitoring well data, TCE appears to be above the GCTL, but below the 50% NADC goal for the site. The screen issue for the newly proposed wells is the same as the LETF site. Lithology will be collected and used to determine appropriate well screens. Team consensus reached to repair the system as needed to maximize efficiency and re-energize. Team consensus reached to wait to install two replacement sparge wells at AS0015 and AS0016 based upon future monitoring results. Team consensus reached to install additional IAS system performance monitoring wells (8 total, intervals will be determined once lithology is collected). Team consensus reached to continue semi-annual groundwater sampling with the following wells: 8 proposed wells, MW0005I, MW0009IS, MW0012IS, and MW0013IS.

Goal:

Present data from two quarterly groundwater monitoring events. Discuss 2006 LETF/Prototype Shop data relative to the building M7-505 Facility. Obtain team consensus on recommendations to modify and restart the system.

Decision:23	0701-D23 Waste Treatment Tank Building M7-505 (SWMU 39)- Team consensus reached to repair the system as needed to maximize efficiency and re-energize.
Decision:24	0701-D24 Waste Treatment Tank Building M7-505 (SWMU 39)- Team consensus reached to wait to install two replacement sparge wells at AS0015 and AS0016 based upon future monitoring results.
Decision:25	0701-D25 Waste Treatment Tank Building M7-505 (SWMU 39)- Team consensus reached to install additional IAS system performance monitoring wells (8 total, intervals will be determined once lithology is collected as part of the LETF investigation).
Decision:26	0701-D26 Waste Treatment Tank Building M7-505 (SWMU 39)- Team consensus reached to continue semi-annual groundwater sampling with the following wells: 8 proposed wells, MW0005I, MW0009IS, MW0012IS, and MW0013IS.

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
8/7/07	102	3	Dankerl, Erik	BUILDING M7-505 (SWMU 039)

Topic:

M7-505 (SWMU 39)

Discussion:

Team consensus reached to continue system operation and maintenance for the remediation of VOCs and minimize offsite migration. Team consensus reached to replace the compromised AS wells (AS0015 and AS0016) to maximize coverage and increase efficiency if necessary. Team consensus reached to expand the system of AS coverage with two additional wells in the area(s) where COCs are above the NADC. One vapor extraction well is warranted adjacent to the building to mitigate potential vapor intrusion from the proposed AS well. Team consensus reached to continue with semi-annual groundwater sampling of the current eighteen monitoring wells. Action item for Mike to add this remediation system to a future team agenda. For the future discussion of this system, team will need a comprehensive summary of data and locations (including DPT) for site including any pertinent adjacent site information.

Goal:

Annual groundwater status report and obtain team consensus on path forward.

Decision:4	0708-D04 M7-505 (SWMU 39)- Team consensus reached to continue system operation and maintenance for the remediation of VOCs and minimize offsite migration.
Decision:5	0708-D05 M7-505 (SWMU 39)- Team consensus reached to replace the compromised AS wells (AS0015 and AS0016) to maximize coverage and increase efficiency if necessary.
Decision:7	0708-D07 M7-505 (SWMU 39)- Team consensus reached to continue with semi-annually groundwater sampling of the current eighteen monitoring wells.
Decision:6	0708-D06 M7-505 (SWMU 39)- Team consensus reached to expand the system of AS coverage with two additional wells in the area(s) where COCs are above the NADC. One vapor intrusion well is warranted adjacenet to the building to mitigate potential vapor intrusion from the proposed AS well.

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
8/28/08	130	3	Dankerl, Erik	BUILDING M7-505 (SWMU 039)
Topic:				
Treatment Tank Building M7-505 (SWMU039)				
Discussion:				
Currently 19 AS wells and 15 VE wells in operation, after installation of two additional AS wells and two SVE wells in December 2007. Groundwater sampling from November 2007, January 2008, and May/June 2008 revealed TCE below 50% NADC (remedial goal), elevated cDCE concentrations within the AS ROI, but also beyond system influence to the south-southwest (delineation not complete), and unidentified hot spot may remain north of MW19. Team consensus reached to shut down the SVE system and continue O&M of remediation system; to conduct additional DPT groundwater investigation north of MW19, near MW13I (collect shallow samples), and in vicinity of MW23 and MW25; and to install additional monitoring wells in vicinity of MW23 and MW25.				
Goal:				
Annual Groundwater Monitoring Status Report				
Decision:2	0808-D02 Treatment Tank Building M7-505 (SWMU039) - Team consensus reached to shut down the SVE system and continue O&M of remediation system; to conduct additional DPT groundwater investigation north of MW19, near MW13I (collect shallow samples), and in vicinity of MW23 and MW25; and to install additional monitoring wells in vicinity of MW23 and MW25.			

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
10/8/09	140	6	Dankerl, Erik	BUILDING M7-505 (SWMU 039)

Topic:

Building M7-505 (SWMU 39)

Discussion:

Several air sparge points appear to be compromised below the groundwater table and are repeatedly obstructed with intruded silts and sands resulting in low flow and high back pressures. The underground air supply piping to AS0015 is compromised somewhere between the well and the compound. Currently there are six air sparge wells that either have low to no flow which will be addressed during subsequent O&M events. Non-routine maintenance continues to develop due to weather degradation and age of the system. Groundwater remediation is evidenced by historical decreases of TCE and cis-1,2-DCE in groundwater. Portions of the remediation system are in need of repair and/or replacement. Cis-1,2-DCE and TCE appear to be degrading to VC at the edge of the down-gradient air sparge curtain. VC is accumulating along and beyond the down-gradient southern edge of the remediation system. Concentrations of cis-1,2-DCE are above the NADC down-gradient and beyond the southern edge of the remediation system. Team suggested looking at the MIP investigation that was done in the area of M7-505 and LETF. Team discussed collecting a continuous DPT coring to ensure that we are not missing an interval. Team consensus reached to maintain and repair (as needed) the system to minimize the down-gradient migration of COCs. Team consensus reached to conduct approximately 40 potential DPT locations focusing generally on the 10, 25, and 35 foot intervals with a mobile laboratory. Team consensus reached to complete three lithologic borings that traverse north to south. Team consensus reached to collect continuous DPT corings in a few locations to ensure we are not missing anything. Team consensus reached to continue semi-annual groundwater sampling for VOCs and sample select monitoring wells for 1,4-dioxane. A step 1 engineering evaluation delineation ADP with results of additional DPT and MWs, followed by a step 2 is forth coming.

Goal:

Present annual groundwater monitoring status report

Decision:18	Team consensus reached to maintain and repair (as needed) the system to minimize the down-gradient migration of COCs.
Decision:19	Team consensus reached to conduct approximately 40 potential DPT locations focusing generally on the 10, 25, and 35 foot intervals with a mobile laboratory.
Decision:20	Team consensus reached to complete three lithologic borings that traverse north to south.
Decision:21	Team consensus reached to collect continuous DPT corings in a few locations to ensure we are not missing anything.
Decision:22	Team consensus reached to continue semi-annual groundwater sampling for VOCs and sample select monitoring wells for 1,4-dioxane.

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
10/27/10	148	8	Starr, Scott	BUILDING M7-505 (SWMU 039)

Topic:

Building M7-505 Treatment Tank (SWMU 38)

Discussion:

Team consensus reached that 1,4 Dioxane requires no further consideration at this site. There are shallow petroleum issues at the site within the area of chlorinated VOC affected groundwater. Team consensus reached that the dissolved phase COCs are delineated horizontally and vertically. Monitoring wells were proposed in the ADP to monitor the plume to make sure it is stable and to be used for attenuation rates for future use. MW0055 is proposed to confirm the vertical delineation at MW0032 and MW0033. A table was provided and a revised figure was generated for the proposed monitoring well network. A lot of the DPT locations were sampled continuously. Team consensus reached that this site is not a good candidate for chemical oxidation; this will not be evaluated in Step 2. Team concluded that consideration should be given for future well screens in the low concentration plume using 10 foot screens based on the lithology instead of based on parameter distribution. . Team consensus reached to not install a monitoring well network at this time. Team consensus reached to turn the air sparge system off. Team consensus reached to continue current LTM program and move to Step 2 EE. Technologies to be evaluated include air sparging, bioremediation, and monitored natural attenuation.

Goal:

Obtain team consensus EE Step 1 and path forward

Decision:20	Team consensus reached that 1,4 Dioxane requires no further consideration at this site.
Decision:21	Team consensus reached that the dissolved phase COCs are delineated horizontally and vertically.
Decision:22	Team consensus reached that this site is not a good candidate for chemical oxidation; this will not be evaluated in Step 2.
Decision:23	Team consensus reached to not install a monitoring well network at this time.
Decision:24	Team consensus reached to turn the air sparge system off.
Decision:25	Team consensus reached to continue current LTM program and move to Step 2 EE.

Summary of KSCRT Meeting Minutes from January 2006 through May 2011
RFI Progress Report for Building M505
Kennedy Space Center, Florida

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
3/24/11	151	7	Starr, Scott	BUILDING M7-505 (SWMU 039)
Topic:				
M7-505 (SWMU 039)				
Discussion:				
This step 2 evaluated 5 alternatives to reach GCTLs based on three remedial approaches (air sparging, bioremediation, and MNA). The cost estimates developed for each alternative are based on an estimated timeframe to reach GCTLs. Team discussed at length the uncertainties associated with estimating time frames and subsequent life-cycle costs. From this point forward NASA has requested that A/E contractors include mass estimates in Step 2s to evaluate costs based on total mass. Team consensus reached to implement Alterative 1: In situ air sparging of NADC Area/MNA for GCTL area, re-evaluate system expansion to treat GCTL area in the future (if site usage changes and/or additional funding becomes available). Rental or purchase of an air sparge trailer will likely be required since the KSC air sparge trailers are currently obligated to other sites.				
Goal:				
Step 2 EE				
Decision:5	Team consensus reached to implement Alterative 1: In situ air sparging of NADC Area/MNA for GCTL area, re-evaluate system expansion to treat GCTL area in the future (if site usage changes and/or additional funding becomes available).			

Meeting Start Date:	Meeting ID:	Minute ID:	Presenter:	PRL / SWMU:
5/26/11	152	8	Starr, Scott	BUILDING M7-505 (SWMU 039)
Topic:				
Building M7-505 (SWMU) and LETF (SWMU 091)				
Discussion:				
The estimated total mass is approximately 24 lbs, which includes GCTLs and NADCs. The overall corrective action objective is to reach the GCTLs in a phased approach: active remediation via air sparging of area exceeding the NADCs to below NADCs followed by MNA until the GCTLs are reached. An additional objective is to install/connect proposed sparge wells at LETF to the proposed remediation system at M7-505 and operate until vinyl chloride concentrations in groundwater at LETF are reduced below the NADC for vinyl chloride. Also, a potential future objective may be to evaluate system expansion to treat the area exceeding GCTLs if site usage or objectives change. The length of sparge screens may be revised to a length of 1.5 ft from 30 inches to allow injection of the air as deep as possible. However, shortening the screens could limit injection flow rates if sediment build-up in the sparge wells and finer grained intervals are located across the shorter screen length. Comments provided prior to team meeting were addressed throughout the presentation. Team consensus reached to proceed to completing and implementing an IM WP for in situ air sparging of area exceeding NADCs at M7-505 and LETF.				
Goal:				
Present Step 3 Engineering Evaluation and obtain team consensus on path forward.				
Decision:20	Building M7-505 and LETF (SWMU 091) -Team consensus reached to proceed to completing and implementing an IM WP for in situ air sparging of area exceeding NADCs at M7-505 and LETF.			

1305-M07 Joe Applegate/ ARCADIS

Building M7-505 Treatment Tank (SWMU 39) and LETF (SWMU 091)

Goal: Present Step 4C Engineering Evaluation

Discussion: Step 1 EE presented in October 2010 for M7-505:

- No apparent remaining TCE hot spot(s),
- Dissolved-phase COCs delineated horizontally and vertically,
- Highest concentrations located in 20 to 30 ft BLS interval,
- Areas of M505 plume exceeding GCTLs (101,200 ft^2) and NADCs (10,500 ft^2)

Step 2 EE presented in March 2011 for M7-505:

- Evaluation of air sparging, bioremediation, and monitored natural attenuation (MNA)
- KSC Remediation Team reached consensus for selection of air sparging of affected groundwater > NADCs and MNA of groundwater > GCTLs

Step 2 EE presented in December 2010 for LETF:

- Vinyl chloride the only constituent above GCTL,
- Approximately 3,100 ft^2 of groundwater above NADC at 20 to 28 ft BLS,
- Approximately 39,500 ft^2 of groundwater above GCTL,
- Evaluation of air sparging, bioremediation, chemical oxidation, and monitored natural attenuation (MNA), and
- KSC Remediation Team reached consensus for selection of MNA of groundwater greater GCTLs

Step 3 EE presented in May 2011 for M7-505/LETF:

- Conceptual design and layout of air sparging system and

Revision 0 Meeting Minutes for August 20, 2014

Scott Starr/
ARCADIS

M7-505 (SWMU 039)

Goal: Present Step 4 EE

Discussion: Based on Step 3 EE addendum presented to the team in August 2013, team concurred with system expansion to add seven air sparge wells to address TCE detections greater than GCTLs. Expanded system constructed and system was re-started in December 2013. The original corrective action objective milestone 1 to actively remediate the area exceeding the NADCs to below NADCs was achieved in the first year and maintained during the second year of operation. Milestone 2 was to expand the remediation system to reduce TCE concentrations to less than GCTLs in locations beyond the initial area of influence of the remediation system and continue operation of pre-expansion air sparge wells to further reduce COC concentrations. The eastern vinyl chloride plume beyond the system influence will be managed via monitored natural attenuation.

The IAS system has an operational time of 93% since startup in January 2012 through May 2014 excluding the planned shutdown from June 2013 to December 2013 for system expansion. The system ROI generally exceeds the design criteria with observed ROIs up to 40 ft. Average flow rates per IAS well range between 3.0 scfm to 4.7 scfm at pressures ranging from 13 to 23 psi.

The results of the annual groundwater monitoring program indicate that the historical NADC exceedances of TCE, cDCE, and VC remain below Phase I remediation milestone. Twenty monitoring wells within the area of influence are below GCTLs as of May 2014. Nine monitoring wells within the area of influence exceed the GCTLs. Three monitoring wells beyond the area of influence remain above GCTLs (eastern area). The average reductions observed in TCE, cDCE, and VC concentrations within the area of influence of the system were 85, 86, and 88 percent from baseline sampling in November 2011. The area of affected groundwater exceeding the GCTLs has been reduced from approximately 101,200 square feet to 26,800 square feet. Approximately 11,250 square feet of the 26,800 square feet is beyond the area of influence of the system on the eastern side of the site.

Team consensus reached to shut-down AS0001 to AS0010 where GCTLs have been obtained. If there is rebound observed following shut-down appropriate air sparge wells will be turned back on.

Team consensus reached to continue operation of system to reduce TCE concentrations to below GCTLs.

Team consensus reached to eliminate 13 performance monitoring wells (MW0037, MW0046, MW0050, MW0054, MW0015, MW0017, MW0022, MW0040, MW0047, MW0007, MW0024, MW0026, and MW0036) from the sampling program as long as none are deemed key wells to monitor for potential rebound where AS0001 to AS0010 will be shutdown.

Results: Decision items 1408-D09 to D11

- NASA added the LETF vinyl chloride plume associated with SWMU 091 located on the eastern side of Building M7-505.

Step 4A EE presented in April 2012, documented construction completeness of air sparge system.

Step 4B EE presented in October 2012, documented system performing in accordance with design.

Exit Strategy for LETF – LTM or expansion. The costs are comparable.

Exit Strategy for M7-505 – LTM or expansion.

The remediation objective to reduce groundwater at LETF and M7-505 below NADC has been achieved. Budget is available to continue operating the current system until the end of the year.

Suggestion was made to alter the air flow to get the area where TCE is present under the drainage swale. An interim suggestion was to continue to optimize and look at air sparge locations that could be installed with limited cost. There are parent compounds present to the north and we could possibly install additional air sparge wells in the areas where TCE is present to remove these compounds along the drainage swale. There is currently no funding to do expansion.

Team consensus reached to continue operating up to December 2013.

Team consensus reached to expand system to treat the TCE area to the north and west in the future.

Results: Decision items 1305-D16 to D17